

# Small-State Crisis Management: The Icelandic Way

*Asthildur Elva Bernhardsdottir and Lina Svedin*

Title: Small-State Crisis Management: The Icelandic Way  
Editors: Asthildur Elva Bernhardsdottir and Lina Svedin  
ISBN: 91-89683-42-0  
ISSN: 1650-3856  
A Publication of the Crisis Management Europe Research  
Program  
Cover design: Leif Arback  
Printer: Elanders Gotab 46262, Stockholm 2004  
Number of copies: 600 ex.

[www.crismart.org](http://www.crismart.org)

# Table of Contents

<b>Acknowledgements</b> .....	5
<b>Foreword</b>	
<i>Gunnar Snorri Gunnarsson</i> .....	7
<b>Abbreviations</b> .....	9
<b>Part I: Introduction</b>	
<b>Chapter 1</b> <b>Introduction</b>	
<i>Lina M Svedin and Asthildur Elva Bernhardsdottir</i> .....	13
<b>Chapter 2</b> <b>Crisis Management and the Icelandic Context</b>	
<i>Asthildur Elva Bernhardsdottir and Gunnar Helgi Kristinsson</i> .....	33
<b>Part II: The Case Studies</b>	
<b>Chapter 3</b> <b>Earthquakes in Southern Iceland: Crisis Management and Crisis Help</b>	
<i>Gudny Bjork Eydal and Gudrun Arnadottir</i> .....	43
<b>Chapter 4</b> <b>The Fishmeal Crisis</b>	
<i>Baldur Thorhallsson and Elva Ellertsdottir</i> .....	91
<b>Chapter 5</b> <b>The Stranding of Ms. Vikartindur</b>	
<i>Asthildur Elva Bernhardsdottir and Soffia Gudmundsdottir</i> .....	143
<b>Part III: Concluding Remarks</b>	
<b>Chapter</b> <b>Findings, Conclusions and Propositions</b>	
<i>Asthildur Elva Bernhardsdottir and Lina M. Svedin</i> .....	215
<b>About the Authors</b> .....	239



# Acknowledgements

The editors would like to extend a heartfelt thank you to a number of people and institutions, which have made this volume on Icelandic crisis management possible. We would like to first of all thank all of the case writers for their pioneering research and for their Icelandic stubbornness and acceptance that everything in life has its own pace as the editing phase of this book took longer than any of us had anticipated. Their patience and hard work is really what has made this book as good as it is. We would also like to thank the Icelandic government officials who opened doors for our case authors and shared their experiences and expertise. In connection to this, we would like to express our particular gratitude to Gunnar Snorri Gunnarsson, the Permanent Secretary of State, who wrote the foreword to the book, and to Solveig Thorvaldsdottir, who during her time as the director of AVRIK (the National Civil Defense organization) served as a valuable asset and source of support for us.

In Sweden we are particularly indebted to the Swedish Emergency Management Agency for its substantial support, and the Swedish National Defence College for its welcoming environment and logistical support.

In addition, the invitation to the ECMA conference “Foundations for Cooperative European Crisis Management: Establishing Common Ground” in Stockholm, November 2001, was invaluable for the Icelandic research group. ECMA is a European network for crisis managers and academics with an interest in research training and the development of this field in study and practice. The Icelandic case writers were given the opportunity to present their cases and receive good feedback, comments and questions from the audience.

We would also like to thank Peg Hermann and the Global Affairs Institute at the Maxwell School of Citizenship and Public Affairs at Syracuse University for hosting Asthildur as a visiting scholar in the spring of 2002 and for inviting us both to the EU/US Crisis Management Conference at Minnowbrook, New York, in August 2003. Both these invitations provided the editors with a rare and wonderful experience of closely working together to develop ideas about crisis management and test them in a most exhilarating and fruitful academic environment.

We are also very grateful for the wonderful and sharp intellectual community at CRISMART, where many of our colleagues leaped – on a moments’ notice – at the chance to debate propositions and theoretical frameworks for the book..... defying the exceptional heat and sun in Stockholm the summer of 2003. Lina would like to thank Jesper Grönvall, who started out as the Swedish coordinator of the book, for getting the group off to a cheerful start and for graciously handing over the editing of the book to her. We would both like to express our gratitude and admiration for the professional standards with which Stephanie Buus and Stephanie Young have reviewed and copy edited this entire volume.

Lina M. Svedin and Asthildur Elva Bernhardsdottir



# Foreword

It is perhaps not surprising that academic work on Icelandic crisis management focuses on a case study concerning the Icelandic Ministry of Foreign Affairs. Indeed, the media's portrayal of international affairs largely amounts to the coverage given to crises.

It is true that the Foreign Ministry is most visible when there is an international crisis, although I am happy to say that crisis management does not constitute the bulk of the Ministry's work. Indeed, we devote much more time and energy into ensuring that our relations with other members of the international community are such that crises can be predicted and thus avoided.

Nevertheless, crises do occur and it is then a government's performance is suddenly cast into the spotlight. When a crisis involves international relations, it is the Foreign Minister and the civil servants who bear the brunt.

Given the major upheavals in the world and the ongoing crises in international affairs over the past years, the Icelandic crises investigated in this book may well seem trivial. Fishmeal is perhaps not the stuff of high diplomacy. Yet for the Icelandic economy as a whole and particularly for the small fishing communities which rely on the production of fishmeal for their economic survival, this was a crisis of major proportions affecting in the worst case around 7% of the export value of Icelandic goods.

The Icelandic Foreign Service is small by international standards. We have twenty missions and embassies abroad and around 200 staff members (about half in the Ministry at any given time). The fishmeal crisis involved our major trading partner, the European Union, which is a complex creature. In addition to the Commission and its many departments, one must also be prepared to directly lobby the member states. As a result, nine of Iceland's twenty embassies were directly involved in the fishmeal crisis.

The thorough analysis of crisis management approaches through case studies is a valuable contribution to dealing with crises, not the least in public institutions. It should also provide food for thought regarding international crisis management and thus provide the international community with assistance in addressing crises. This volume on Icelandic crisis management does just that.

Gunnar Snorri Gunnarsson  
Permanent Secretary of State  
Ministry for Foreign Affairs  
Iceland





# Abbreviations<sup>1</sup>

<b>AVRIK</b>	National Civil Defence of Iceland [Almannavarnir ríkisins]
<b>DH</b>	Directorate of Health in Iceland
<b>DMHT</b>	Disaster Mental Health Team at the LSH
<b>EEA</b>	European Economic Area
<b>EFAI</b>	The Environmental and Food Agency in Iceland
<b>EFTA</b>	The European Free Trade Association
<b>FBSH</b>	The air rescue team from Hella
<b>HP</b>	Head Physician at the Health Care Center in Hella
<b>ICEREP</b>	Icelandic Ship Duty Reporting System
<b>ICE-SAR</b>	Icelandic Association for Search and Rescue [Landsbjörg]
<b>ICG</b>	Icelandic Coast Guard
<b>IFOMA</b>	International Fishmeal & Oil Manufacturers' Association
<b>IMO</b>	Icelandic Metrological Office
<b>IRC</b>	Icelandic Red Cross
<b>LSH</b>	National University Hospital in Fossvogur, Reykjavik
<b>MRCC</b>	Maritime Rescue Co-ordination Centre
<b>NATO</b>	North Atlantic Treaty Organization
<b>NDIF</b>	National Disaster Insurance Fund
<b>NLSA</b>	National Life-Saving Association of Iceland
<b>OSCE</b>	Organization for Security and Co-operation in Europe
<b>PAME</b>	Working Group for the Arctic Council
<b>PD</b>	Psychological debriefing
<b>PFA</b>	Psychological First Aid
<b>PfP</b>	Partnership for Peace
<b>PS</b>	Psychological support
<b>PTSD</b>	Post traumatic stress disorder
<b>RCCD</b>	The Rangarvalla County Civil Defense
<b>SCAN</b>	Standing Committee on Animal Nutrition
<b>SVC</b>	Standing Veterinary Committee
<b>TFV</b>	The radio communications center of the Post and Telegraph Administration in the Westman Islands
<b>UNDAC</b>	United Nations Disaster Assessment and Coordination Team

<sup>1</sup> The English translations for many of these organizations come directly from the organizations themselves. Thus, there are variations between British and American spelling.



PART I  
INTRODUCTION



# Chapter 1

## Introduction

*Lina M. Svedin and Asthildur Elva Bernhardsdottir*

Iceland is a small state in most senses of the word. The World Bank's project on small states defines these states as having 1.5 million or less inhabitants (The World Bank Group, 2000:1).<sup>1</sup> While not a developing state (which is the focus of the World Bank's special summit), Iceland shares many of the same challenges of its fellow small states. It has a very small population with a relatively large geographic surface but is sparsely populated. More than half of Iceland's 290,000 inhabitants<sup>2</sup> live in Reykjavik or in the immediate surroundings. The state itself has a small elected body and a small administration. The Icelandic Parliament (the Althing) has sixty-three members and it is the oldest working parliament in the world (Statistics Iceland, 2004). Yet Iceland is a country with unusually large challenges, even by West-European measures, regarding civil defense and socio-economic issues core to the state's survival.

Geographically Iceland lies in the midst of the turbulent North Atlantic Sea, on top of the rift between the American and Eurasian tectonic plates that are gradually drifting apart. Ravaged by its harsh climate, Iceland is naturally prone to disasters. The many natural disasters and the uncertainty of the environment have made Icelanders self-reliant in terms of civil defense and disaster management. Along with a great sense of individual responsibility and initiative, there is also a strong emphasis on community resilience and participation in volunteer organizations. The importance of the individual as part of the larger collective/community outlines the country's egalitarian civil defense culture.

Iceland is distinctive not only for its small size and proneness to natural disasters, but also for its dependence on international markets and its particular politico-economical position. Iceland is physically close to the United States and has many economic, strategic and cultural ties to its large neighbor in the west. Furthermore, Iceland is a part of Europe. It shares the Nordic cultural heritage and basic values, and it works closely with Norway and Denmark. While culturally connected to Europe and economically dependent on the EU market as an outlet for its niche products and imports, Iceland is not a member of the European Union. As an outsider, Iceland has joined the EES trade agreement and Schengen to offset some of the negative effects of its non-EU status.

This book is the result of a collaborative research effort bringing Icelandic and Swedish scholars together to document and analyze some of Iceland's most recent and challenging na-

---

<sup>1</sup> "There is not single definition of a small country because size is a relative concept. For instance, Simon Kuznets in 'Economic Grothe of Small Nations' used an upper limit of 10 million people – by this measure, 134 economies are 'small' today. Other indicators such as territory size or GDP are sometimes used. But population is highly correlated with territory size as well as with GDP; therefore, use of population as an indicator of size helps highlight small states' limited resources. By the same token, there is no special significance in the selection of a particular population threshold to define small states. Indeed, the Commonwealth, in its work on small states, uses a threshold of 1.5 million people, but it also includes larger member countries (Jamaica, Lesotho, Namibia and Papua New Guinea) because they share many of the same characteristics of smallness" (World Bank Group, April 2000).

<sup>2</sup> According to Statistics Iceland, the population of Iceland was 290,490 on December 1, 2003.

tional crises. In addition to examining the particular challenges and implications of each of these crisis cases, the volume contributors have placed these cases in a comparative perspective emphasizing the cultural role in crisis preparedness and response and the particular advantages and challenges of small state crisis management.

The case authors were invited to participate by Asthildur Elva Bernhardsdottir, who acted as the Icelandic group coordinator and co-authored one of the case studies. On the Swedish side, Jesper Grönvall functioned as interim coordinator for the Icelandic group before Lina Svedin was available to take over as the Swedish co-editor of the volume. Asthildur and Lina were able to work on the volume in Syracuse, while Lina was pursuing her doctoral studies at the Maxwell School's Global Affairs Institute and while Asthildur enjoyed a six-month visiting scholar position there.

### *CRISMART and the CM Europe Research Program<sup>3</sup>*

The Crisis Management (CM) Europe Research Program is devoted to documenting and analyzing crises at the regional, national and international level. The program was initiated in 1997 by CRISMART (The Center for Research and Training) under the name Crisis Management (CM) Baltic. It took on the task of analyzing how the newly independent states in the Baltic Sea area were managing the upsurge of critical situations that marked the transition from communist rule to democracy, increased openness, and market economies. This early interest for the Baltic countries was initiated and supported by the Swedish Agency for Civil Emergency Preparedness (ÖCB). The underlying ambition of CM Baltic was to, in close collaboration with scholars and practitioners in these countries, build a support network for crisis management research and practices, and in that way strengthen the resilience of these transitional countries to critical challenges.<sup>4</sup>

Today, the program has been broadened to the rest of Europe. Since the first Estonian research collaboration was initiated in 1997, similar groups have been established in Latvia, Lithuania, Poland, Russia, Slovenia, Sweden, Kaliningrad, Romania, Bulgaria, the Ukraine, China and Iceland. Edited volumes, similar to the one presented here (i.e., exploring crisis management in these countries individually), have been published through the Swedish Emergency Management Agency (formerly the Swedish Agency for Civil Emergency Planning) and the Swedish National Defence College.

<sup>3</sup> The CM Baltic research program was originally established in 1997. As of July 2000, it expanded and became known as the CM Europe program. Therefore all reports prior to July 2000 are cited as CM Baltic/Europe reports and those after July 2000 as CM Europe reports.

<sup>4</sup> In 1997 five closely related goals were set up by Stern and Sundelius (2002: 72):

- 1) To develop and refine theoretically based analytical tools for studying and learning from crisis experiences,
- 2) To promote the development of crisis studies (a multidisciplinary academic field) as a knowledge base for an enhanced crisis management capacity in Sweden (and other countries),
- 3) To encourage scholars and practitioners from European countries (especially from the new and vulnerable democracies around the Baltic Sea Area) to document, analyze, compare, and share knowledge of their crisis experiences,
- 4) To promote national and transnational dialogue between the scholarly and practitioner crisis management communities in Europe through training workshops and thematic conferences, and
- 5) To promote confidence-building and the development of a capacity for political/operational collaboration among the governments and international organizations of the region.

CM Europe's research is, broadly speaking, a cognitive-institutional approach to crisis management. The approach draws on cognitive and social psychology, organizational theory, public administration, political science, and foreign policy analysis. It has been developed to analyze decision-making and policy-making dynamics in extraordinary situations. The research approach involves analyzing crises from the view of the decision maker(s) involved. A crisis is therefore defined as a situation where *decision-makers perceive* the situation to involve: a threat to core value(s), a great amount of uncertainty, and time pressure.

The case studies produced within CM Europe use the same method and structure to facilitate cross-case comparisons.<sup>5</sup> CRISMART has compiled a case bank of the CM Europe research studies and this volume is a contribution to it. One of the main purposes of the case bank is to enable cross-case comparisons. This volume has utilized the research findings in the case bank as a point of reference, and comparisons are made in the concluding chapter of this book.

### *Method*

The case studies in this volume, like the studies in the case bank, follow the same basic research procedure. First, the crisis is placed in its relevant historical, institutional and political context. This step is necessary in order to provide a contextually sensitive and culturally informed interpretation of crisis behavior. The case writers are selected directly from the country in focus and, as scholars and practitioners, they often have first hand experience of the institutional setting.

Secondly, the time frame of the crisis is established and thereafter a detailed account of the events is put together. By dividing the crisis into critical time intervals and the successive course of events, it is easier to empirically analyze the case. The synthetic narrative of events helps the analyst identify the building blocks of decision-making processes.

Thirdly, the key decision-making occasions are identified and explored in detail. Key decision-occasions are identified by three criteria: their significance in the crisis decision-making process, their importance in the aftermath of the crisis, and their pedagogical value. The starting point of a decision-occasion is trigger (a so-called impetus) when decision makers ask the question "what-do-we-do-now?" This part of the analysis is focused on opportunities for action rather than action or decisions in themselves. This makes it possible to also focus on critical decisions where windows of opportunity are opened and where an intervention could alter the unfolding of events even if no action in fact is taken (so-called 'non-decisions').

The fourth and final step is to examine the case as a whole from a number of prioritized analytical themes. These themes are explained in brief in the following section.<sup>6</sup>

---

<sup>5</sup> The CM Europe analytical approach has been outlined in detail in Stern (1999) and Sundelius, Stern and Bynander (1997). For applications of the approach, see also Stern and Bynander (1998), Stern and Nohrstedt (1999), Stern and Hansen (2000), and Porfiriev and Svedin (2002).

<sup>6</sup> For further explanation of each of these steps and their theoretical background, see Stern and Sundelius (2002: 73–80).

## *CM Europe Analytical Themes<sup>7</sup>*

The Icelandic case authors were asked to analyze their particular crisis from a set of ten overarching crisis themes.

**1. Preparedness, Prevention and Mitigation.** This theme focuses on the degree to which the decision makers and the organizations they work in were prepared to meet and manage the extraordinary situation examined in the case study. The case authors posed a number of questions: Had the crisis managers experienced a similar situation before? Had they acquired lessons and/or experience from other severe crises? Had the decision makers developed a mind-set that “it can happen here” or “it can happen to us?” Were there plans and infrastructure in place to manage the crisis, and were these exigencies adapted to the specific situation at hand? Were the decision makers able to detect potential threats and act on early signs to prevent the situation from escalating? Did the decision makers identify “windows of opportunity” for limiting the impact of the event and utilize these opportunities?

**2. Decision Units.** This theme focuses on how and where central decisions are made in the complex organizational systems that typically engage in the management of crises. Crucial decisions can be taken by individuals, small groups ( tandems or dyads), medium-sized groups, or entire organizational networks. Similarly, decision units may be located at different levels and play different roles within a given political, administrative or private organizational system. These units may be primarily strategic or operationally focused groups. Their composition may vary considerably as may their mode of operation and their proximity to the action during the course of a crisis. It is common that the locus of decision-making authority is shifted upward (up-scaling) or downward (down-scaling) over the course of a crisis, as part of complex politico-administrative escalation and de-escalation processes (Stern and Sundelius, 2002: 78; see e.g. Snyder, Bruck and Sapin, 1963; Hermann, Hermann, and Hagan, 1987; Stewart, Hermann, and Hermann, 1989; Rosenthal, ‘t Hart, and Kouzmin, 1991; Stern, 1999). Case writers also examine what the criteria are for determining which individuals and organizations will be kept “in the loop” (included) or “out of the loop” (excluded) by the key decision-making unit.

**3. Leadership.** This theme focuses on different styles and types of leadership exhibited by the key actor(s) in a crisis. Leadership may be functionally operative and involve taking charge of crisis management activities and coordination. Leadership may also be symbolic; that is, showing through words and actions that those in charge are participating in the crisis and empathize with those victimized or at risk in the crisis. Individual leadership styles “may be concrete and personal, or more abstract and distant. In deliberations leaders may be directive/hierarchical or facilitative/collegial” (Stern and Sundelius, 2002; Stern and Hansén, 2000). Leadership is relational and inextricably linked to followership. It is also “mediated by factors such as power, affect, culture, organizational structure, access to expertise and context. Finally, leaders vary in their propensities to micro-manage and delegate when it comes to critical decisions” (Stern and Sundelius, 2002; Stern and Hansén, 2000).

---

<sup>7</sup> This section is based on and Stern and Sundelius (2002: 78–80), Nohrstedt and Stern (1999), and Stern and Hansén (2000).



**4. Problem Perception and Problem Framing.** Under the heading of this theme, the subjective and social construction of crises is examined. Decision makers act on their perceptions and interpretations of what is happening around them, rather than on uncontested and objective knowledge about the situation at hand (Stern and Sundelius, 2002; Snyder, Bruck, and Sapin, 1963; Sylvan and Voss, 1998; Stern, 1999). Problem framing often takes place on a semiconscious level, especially by inexperienced decision makers, and this problem framing process exerts a profound influence on decision makers' choices. Consequently, when a problem has been framed, many possible lines of action have already been eliminated, and strong propensities for and constraints on action created. Framing is strongly shaped by cognitive and social structures, as well as processes such as (historical) analogical and metaphoric reasoning, organization, culture, information flows and context (Stern and Sundelius, 2002; Vertzberger, 1990; Larson, 1985; Khong, 1992; Bynander, 2003; Stern and Hansén, 2000). Using this theme, the case authors in this volume have examined why particular actors perceive and frame problems the way they do at particular junctures of a crisis.

**5. Value Conflict.** This theme focuses on the potential for conflict or tension among the great number of values at stake in crisis situations. Identifying the values at stake in a situation is an integral part of problem framing. "This is often a demanding process and decision makers often overlook values embedded in a complex issue, if they do not engage in rigorous critical deliberations" (Stern and Hansén, 2000; Stern and Sundelius, 2002; see e.g. Steinbrunner, 1974: 16–17 and Keeney, 1992). Crises, by definition, entail a threat to core values some of which may be the preservation of human life, the sovereignty/autonomy of political entities, economic prosperity, democracy, the rule of law and so on. More narrow interests and values, such as the personal and political success of individual officials and parties, are also involved. Good crisis performances can make careers in the same way that poor crisis performances can break them.

Often several values are at stake at the same time during a crisis, and decision makers are faced stressful dilemmas and tragic choices (Janis and Mann, 1977). In response decision makers sometimes choose to ignore or deny value conflicts, something which tends to produce unbalanced policy making. However, decision makers may also choose to face up to the situation, recognize and accept these conflicts, and follow Lenin's dictum, "You can't make omelet without breaking eggs" (Stern and Sundelius, 2002; Stern and Hansén, 2000). Other common coping strategies, in situations of value conflict, are procrastination and hoping for the situation to improve or to solve itself. "Alternatively, decision makers seek to resolve the conflict and find a transcendent solution which adequately protects the key values at stake" (Stern and Hansén, 2000; Stern and Sundelius, 2002; see e.g. George, 1980 and Farnham, 1998:26–39).

**6. Politico-Bureaucratic Cooperation and Conflict.** This theme focuses on the patterns of divergence and convergence, and parochialism and solidarity among actors and stakeholders in a crisis. Several documented dynamics in crises tend to push actors toward cooperation: such as the "rally around the flag" effect, leader attentiveness, and groupthink (Stern and Sundelius, 2002; Stern and Hansén, 2000; see e.g. Rosati, 1981 and Janis, 1982). There are also, however, a number of dynamics that tend to promote conflict among crisis actors. The personal and organizational risks often present in crises may cause political and bureaucratic actors to act defensively, which in turn may aggravate other actors and lead to conflict. Fol-

lowing failures and setbacks, actors often play a “blame game” trying to pass on responsibility or the failure. Likewise, crises also present opportunities for actors to compete in seeking credit for their contribution (and denigrating that of others). Finally, the nature of personal relationships within policy communities and the strength of national cultural norms opposing opportunism tend to moderate situational and contextual factors promoting cooperation or conflict (Stern and Sundelius, 2002; Stern and Hansén, 2000; see e.g. Rosenthal, ‘t Hart, and Kouzmin, 1991; Stern and Verbeek, 1998; Allison and Zelikow, 1999). How do the actors cope with value conflicts that emerge in specific crisis situations?

**7. Crisis Communication and Credibility.** This theme focuses on the relationship between those managing the crisis, the media, the elite and the general public (Stern and Sundelius, 2002; Stern and Hansén, 2000; see e.g. Nohrstedt and Tassew, 1993; Nordlund, 1994; Pearce, 1995; Regester and Larkin, 1998; Henry, 2000). In democratic societies, maintaining credibility and legitimacy with the public and the media are essential components of successful governance, both under ‘normal’ circumstances and in crisis situations. Crisis managers enter crises with varying levels of credibility that they may subsequently rise or fall over the course of the crisis. The approach actors take to crisis communication may vary greatly. Some take (consciously or unconsciously) a defensive or closed stance, which easily turns the media against these decision makers and may cost them credibility. “Others take a more proactive/open stance, and seek to keep the initiative by providing information and establishing friendly relationships with the mass media” (Stern and Hansén, 2000). Also the efforts actors take in coordinating their communication and information strategy and in developing tactics vary greatly. Similarly, some actors may monitor how their messages are being received and act to remedy problems; others may be too distracted with other aspects of managing the crisis or stress that they remain oblivious to growing credibility problems. There are a number of recurring crisis communication problems that lead to “credibility traps,” which involve gaps between words, deeds, expectations or performances and which can cost decision makers dearly. Neglecting the symbolic aspects of crisis management can also take a heavy toll on decision makers’ credibility.

**8. Transnationalization and Internationalization.** This theme focuses on exploring the tendency of crises to spill over borders in an increasingly politically, economically, socially and ecologically interdependent world. Crisis-generating threats can reside or start in one country but may rapidly affect other states and may actually require a coordinated international effort to be managed (Buzan, 1991; ‘t Hart, Stern and Sundelius, 1998; Buzan, Weaver, and De Wilde, 1998; Steinbrunner, 2000). Infectious diseases, natural and technological disasters, financial crises, and terrorism are only a few types of crises that often do not respect country borders. International collaboration in crises may be ad hoc or institutionalized, bilateral or multilateral (Stern and Hansén, 2000; Stern and Sundelius, 2002).

**9. Temporal Effects.** “This theme focuses on temporal effects such as sequencing and synchronicity that may have a significant effect on crisis management. Sequencing refers to the path-dependent nature of crisis decision-making” (Stern and Hansén, 2000). Choices made early on in a crisis tend to constrain the range of possible actions later in the crisis; in the same way that the opening of a funnel is wide and then gradually narrows. This effect sets off the management of a crisis on a particular trajectory, which later on may be difficult to change or

backtrack (Stern and Hansén, 2000; see, e.g. Levy, 1991; Sundelius, Stern, and Bynander, 1997; Billings and Hermann, 1998). Feedback on decisions, particularly negative feedback, often requires decision makers to make further decisions or take additional action. Decision processes, decision-feedback, and adjustment form an important sequence shaping future policy options (Lowi, 1972; Skocpol, 1992; Pierson, 1993). Synchronicity refers to the tendency of events that occur simultaneously to influence each other, either through psychological or organizational mechanisms such as “availability,” opportunity cost, cumulative stress, and distraction (Stern and Hansén, 2000; Snyder, Bruck and Sapin, 1963; Haney, 1997; Stern, 1999). Synchronicity can occur within a particular crisis (when several problems have to be handled at the same time), between two simultaneous crises (like the 1956 Hungarian and Suez crises, or the Watergate scandal and the 1973 Middle East crisis), or between a crisis and another high priority event (such as elections, international state visits or crucial political negotiations) (Stern and Sundelius, 2002; Stern and Hansén, 2000).

**10. Learning.** This last theme focuses on the extent to which actors are able to analyze and utilize their crisis experiences as a basis for change. As noted in the discussion of problem framing, decision makers may use the “lessons” learned from the past (encoded as historical analogies or as experientially based “rules of thumb”) to guide their actions (Stern and Sundelius, 2002). Similarly, actors may react to positive or negative feedback by drawing lessons and modifying their performance under the course of the crisis, or they may focus on learning in the aftermath of the crisis. Actors most commonly attempt to reflect on their crisis experiences after the fact, drawing lessons for future management and formulating reform projects on the basis of this post-hoc interpretation of events (Stern and Sundelius, 2002). Crises may be seen as natural opportunities for reflection and learning, and those involved in crises often feel that this is the most important time for organizations to learn (Dekker and Hansen, 2004.). Post crisis learning attempts, however, are often thwarted or derailed by a variety of political, social and psychological dynamics (Stern and Sundelius, 2002; Stern and Hansén, 2000; see, e.g. Lebow, 1981; Levy, 1994; Breslauer and Tetlock, 1991; Lagadec, 1997; Stern and Sundelius, 1997).

### *An Overview of the Book and Its Case Studies*

This volume presents three case studies on Icelandic crisis management. In addition, a chapter on the administrative context of civil defense in Iceland, written by Professor Gunnar Helgi Kristinsson and Asthildur Elva Bernhardsdottir, describes the background in which the following three crisis cases took place.

The first case study is on the stranding of the vessel *Vikartindur* in March 1997, one of the largest-scale strandings of a vessel in Iceland. One Icelandic coast guard member lost his life during the rescue operation but everyone onboard *Vikartindur* was saved. Afterwards, there were serious environmental concerns oil and dangerous substances contaminating the area. Despite the fact that there was very little contamination, a heated public debate about how the crisis was managed escalated the situation into what Stern (1997) defines as a “second stage crisis”; that is, a situation triggered by public opinion, political opposition and/or discussions in the media (Bernhardsdottir and Gudmundsdottir, this volume).

The second case deals with the crisis management of two major earthquakes in the south lowland of Iceland in June 2000. The first earthquake hit on Iceland's National Day when the nation was celebrating outdoors – the primary reason that there were no fatalities or serious injuries, although the infrastructure and several buildings were damaged. The crisis response in one of the affected counties is analyzed with particular focus on crisis help (Arnadottir and Eydal, this volume).

The third case analyzes the Icelandic government's reaction to a proposal from the European Commission, in November 2000, concerning a temporary ban on fishmeal in animal feed. Since fishmeal and fish oil constituted 7.3% of Iceland's total export value in 2000, this was considered a potential economic crisis. The administration of the Icelandic Ministry of Foreign Affairs reacted swiftly to defend the interests of the fishing industry and the economy of the island (Thorhallsson and Ellertsdottir, this volume).

In the concluding chapter we take stock of the experiences presented in the volume, and in light of these we examine the research questions raised in the introductory chapter. In addition to these three case studies, comparisons and discussions are made with two Icelandic crisis cases previously published by CRISMART. These studies concern the crisis management of the avalanches that hit the villages of Sudavik and Flateyri (Bernhardsdottir, 2001). In the final chapter we will also take a deeper look at how the 'crisis culture' of Iceland at large differs from that of other small but stable democracies. For this purpose, we apply Bernhardsdottir and Kristinsson's (2003) framework on crisis management and cultural theory. Finally, we set out to formulate a number of propositions for further research and analysis of crisis management in small, but developed and administratively stable, countries.

### *Crisis Management in Iceland: Developing Research Questions*

In contrast to the current volume, CRISMART's previous country volumes have dealt with crisis management in transitional countries (the Baltic states, Poland, Slovenia, and Russia). Despite their differences in size, pace of transition, regime stability and other important dimensions, these countries share a pivotal factor, which has greatly influenced their crisis management capabilities. Since 1991, they have been in a process of rapid and dramatic politico-administrative transition, which has had a marked impact on their ability to manage crises.

This study of Icelandic crisis management is CRISMART's second country volume (the first being Sweden) dealing with a state that is economically prosperous and politically stable. While Iceland's crisis management capabilities are thus relatively strong, it is important to consider Icelandic crisis management in a comparative perspective. Points for comparison are presented and used to build an analytical framework.

Iceland shares a number of features with the Nordic and Baltic states. These countries are all geographically relatively small, have small populations compared to the other European states, and are dependent on external markets and trade, which have forced them to open up their markets and adopt liberal trade policies. They have had relatively little leverage over trade partners and share many political and administrative challenges such as voicing their concerns internationally (in particular, agenda setting and negotiations) (e.g. Ingebritsen, 2002:13; Egeberg, 2003).

There are also, however, a number of ways in which Iceland is quite different from the Baltic states and other Nordic states. Like other Nordic states, but unlike the Baltic states,



Iceland is a stable democracy with a long tradition of public administration. Furthermore, Iceland is economically prosperous with a high standard of living across its population (e.g. Lagerspetz, 2003: 55), which is still to a lesser extent the case in the Baltic states even though the economic situation in these countries has steadily improved since independence. Iceland is ethnically homogeneous and shares no land borders with any other countries – another significant difference from the Nordic and Baltic states. Iceland is also exposed to a uniquely large set of natural hazards, compared to the Nordic and Baltic states. Furthermore, Iceland has under the current government (2003) expressed that it has no intention of joining the European Union, a stance shared only with Norway (Egeberg, 2003). Finally, unlike its Nordic neighbors but much like the Baltic States, the size of the Icelandic administration is quite small. Overall, there are arguably more political, economic, cultural and administrative similarities between Iceland and the Nordic countries than between Iceland and the Baltic states. As Follesdal (2002) states:

The Nordic countries have more in common than their geographical proximity; at least three features are salient/.../. In terms of *legal tradition* they are historical strongholds of Scandinavian Legal Realism. *Politically* they are egalitarian social democratic welfare state regimes. *Culturally*, their citizens have regarded themselves as highly homogeneous, religiously, culturally and ethnically.

This volume presents the specific politico-administrative features of Iceland so they can be used for thinking about crisis management in new ways, particularly in small states. Research on small states in the European Union indicates that the distinctive characteristics of smaller states influence their behavior in decision-making processes, making it clearly distinguishable from that of larger states (Thorhallsson, 2002:2). Some of these characteristics include greater flexibility and informality in the administrative process (Katzenstein, 1985), greater responsiveness and initiative from individual public officials, greater administrative coordination (Popaport, Muteba and Therattil, 1971:148), and a greater ability to respond quickly to changes in the external environment (Kautto et al., 2001:9).

However, small states are also characterized as having fewer resources with which to fulfill state functions (Papadakis and Starr, 1982:423), smaller margins of error in policy and decision making (Barston, 1973:19), and an inability to influence the international environment upon which they are greatly dependent (Katzenstein, 1985). Based on these advantages, restraints, and behavioral tendencies of small states, we formulate a number of research questions on how Iceland (as a small, prosperous and established democracy) can be expected to respond and behave during crises. While the three case studies (and the two additional cases included in the concluding discussion) provide us with tentative rather than firm conclusions about crisis management in Iceland and in small states more generally, we see this volume providing some solid points for discussion and ideas for further research on the commonalities in crisis management in small states.

### *Decision Units and Administrative Crisis Processes*

The size of the administration in small states is more likely characterized by informality, pragmatism and flexibility in its policy and decision making (Katzenstein, 1985). Scholars have also argued that the smallness of these states' administrations facilitates coordination and integration as well as promotes responsiveness among public servants (Popaport, Muteba and

Therattil 1971:148). Papadakis and Starr (1982:423) highlight that policy makers in small states with limited resources have a strong incentive to quickly identify and pool expertise, human resources, and other material resources in situations which pose a particular threat. East (1975:60) has argued that because of their functional and geographical range of interests (in foreign policy for instance), small states in fact need fewer resources than large states in order to pursue their state goals and interests. Slack capacity in an administration facing a crisis can cause delays in crisis response due to time consuming and highly formalized procedures, for instance, and can be potentially detrimental to the government's ability to respond at all. The higher level of personal familiarity among the individuals in small state administrations not only facilitates informality but also makes informality and trust important tools for handling situations that could otherwise quickly overwhelm small organizations.

With this in mind, we pose the following questions with respect to Iceland's crisis decision units and administrative processes:

- *Does Iceland use primarily informal networks of communication, and informal and pragmatic decision making during crises?*
- *Does the expected high level of familiarity among Icelandic officials facilitate the crisis management effort by speeding up the decision-making process, enabling informal authorization, and providing high levels of trust for collective administrative actions?*

A second set of research questions are posed with regard to Iceland's administrative system and its relation to crises specifically concerning Iceland's civil defense system. Iceland faces a great number of natural hazards and is prone to various natural disasters. As a consequence of the environmental challenges, we expect Iceland to have a relatively large and well-defined civil defense system (compared to other Icelandic departments/agencies) for the management of a wide range of crises.

- *Is there a clear division of authority and responsibility among the different levels of government?*
- *Are there clear mechanisms for upscaling and downscaling responses within this system based on the ample experience and opportunities for fine-tuning things the civil defense sector has experienced?*
- *Does the Icelandic administrative system emphasize centralization rather than decentralization in responding to crises in order to facilitate coordination and resource mobilization?*

### *Preparedness and Mitigation*

With regard to preparedness and mitigation to adverse events and changes in the external environment, research on small states presents conflicting accounts of the strengths and weaknesses of these states. On the one hand, scholars like Reid (1974: 46) have argued that small states tend to be slow to perceive opportunities and constraints. This may reflect the small size of their bureaucracies as well as small states having less leeway for risk than larger states, which can at least economically better sustain a loss. Barston (1973:19) argues that small states have a smaller margin for error than most larger states and that they are often more cautious. The same absolute loss – of human power, territory or economic infrastructure – is seemingly more serious for a small state than for a larger one.

On the other hand, scholars like Kautto et al. (2001:9) and Geser and Hopfinger (1975:59) point to the positive features of small states, such as increased preparedness and mitigation. Certain small and ‘enabling’ nation-states (such as the Nordic states), Kautto et al. argue, “may be faster and more fit to adjust to global competition and other challenges” (2001:9). Geser and Höpflinger (1975:59) have pointed to small states’ particular “versatility in response” to outside events as a strong point.

In addition to how small state characteristics influence crisis preparedness and mitigation, there is also a number of environmental factors to take into consideration. With so many naturally occurring hazards and the great number of natural disasters that have struck Iceland, preparing for natural disasters and trying to detect them is imperative. Despite limited administrative resources, we see a strong argument for Iceland privileging the detection and early warning of natural disasters. Considering the great number of disasters that have occurred in the past, we also assume that there have been ample opportunities for fine tuning and developing early warning and monitoring systems.

With regard to Icelandic crisis preparedness and mitigation, we pose the following questions:

- *Does Iceland have well-developed detection and early warning systems for natural disasters (such as earthquakes, fires, floods, storms)?*
- *Do Icelandic communities have a high level of preparedness due to the frequency and risk of disasters?*

A similar argument can be made with regard to preparedness for crises in other areas that are vital to the country’s survival. Small states are more vulnerable to economic fluctuations in the world economy and open to domination by trade partners, thus limiting economic and political maneuvering (Papadakis and Starr, 1987:425). Like most modern states, Iceland is highly dependent on trade. It relies on external markets for selling its manufactured niche products and for access to imports. Limited domestic resources constrain the ability of small states to exercise their influence beyond their priority areas (Katzenstein, 1985). As an outsider to the EU, and NAFTA for that matter, we would expect Iceland to prioritize its foreign service for the purpose of staying abreast of important developments in these major external markets.

In light of its vulnerabilities with regard to external environments, we ask the following question about Iceland’s preparedness and mitigation of international crises:

- *Is Iceland following the developments in key external environments (like the EU and the US) closely, and has the administration developed reporting mechanisms that will enable the government to detect signs of potential threats in these areas and quickly mobilize mitigative responses to developing crises?*

### *Crisis Communication, Cooperation, and Conflict*

A number of small state characteristics indicate that cooperation during crises is likely to prevail in Iceland. In addition to personal familiarity within the administrative system, we think that there is greater awareness in small states about the workings of the government and a greater public recognition of government officials that may encourage more cooperation outside of the formal administrative setting. Research has shown that familiarity and frequent in-

teraction between a small number of actors generally facilitates trust building and increases the likelihood of cooperation (Olson, 1982; Axelrod, 1984). In our opinion, there is probably more interaction between the public and the small circle of policy makers in Iceland.

Furthermore, the scarcity of government resources and the public exposure that small state officials get are also likely to facilitate public and private sector collaboration during crises. There is an awareness of the government's limited capacity to handle crises, and this means that it is generally accepted that the private sector jumps in when needed during a crisis. Private sector actors who contribute resources during a crisis have greater chances of being reimbursed after the acute threat has passed. When there are no pre-established contracts for who will pay for what during a crisis or guarantees for reimbursements, there is less cooperation.

In regards to these issues, we ask:

- *Does Iceland's small administration, with a greater degree of familiarity among decision makers and relatively short channels of information in the administration as a whole, create clear information processing in crises?*
- *Does the high visibility of Icelandic state officials and private companies' relative importance in Iceland promote cooperation between public and private actors in crises, even in situations where no formal relationship has been established?*

While these factors may be conducive to cooperation, we also think that administrative features that often generate conflict situations may also affect Icelandic crisis collaboration. Resource scarcity and intra-organizational competition for scarce resources often generate bureau-political infighting during crises, as in politics in general. Small states, like Iceland, may be particularly vulnerable to this type of bureaucratic infighting. Once the acute crisis phase is over, there is often an evaluation period and at that time questions are often raised about the appropriate allocation of resources and authority. Consequently, organizations that have a lot at stake in the post-crisis phase and who are in stiff competition with others for state funding often end up fighting turf wars already in the acute phase of the crisis. The small state tendency to cooperate will not likely override or eliminate the internal struggle for control and for the state's limited resources.

In light of this discussion, we pose the following question:

- *Do the scarcity of resources in the Icelandic administration and the shadow of future budget negotiations generate bureaucratic infighting and blame games in times of crises?*

### *Internationalization and Crisis Management Strategies*

One of the dilemmas for small states is how to manage the trade imbalance and dependency they have on other states while avoiding being bullied around by larger trading partners in the face of a dispute. Some of the ways small states can manage their lack of leverage are to become skilled negotiators, to offer flexible and creative solutions, to build alliances with other small states, or to build a special relationship with one or more key actors in the dispute (Katzenstein, 1985; Sundelius, 1995:73–75). Iceland would most likely deploy one or all of these strategies, rather than taking a hard confrontational line, if it had a dispute with one of its larger trading partners (like the US or the EU). In a dispute with the EU, the Nordic coun-



tries would very likely be an ally for Iceland since they share similar small state problems and there is a strong history of policy coordination between the Nordic countries.

Based on the assertions above we pose the following questions:

- *Does Iceland pursue negotiated solutions rather than a confrontational response to crises when it is facing another state or set of states?*
- *Does Iceland ally itself with the other Nordic countries, in line with the tradition of policy coordination, when facing crises with the EU?*

Crises are charged with value conflicts, not the least for the decision makers who have to mediate between international and domestic partners (see e.g. Putnam, 1988) and who are pressured to take domestic concerns into account when facing an international crisis.<sup>8</sup> Studies reveal that when small states are confronted with international pressure during a crisis and competing values are at stake (i.e., domestic vs. international), the latter often carries more weight (see e.g. Kokk, 1999; Runcis, 2000). The importance of maintaining good trade relations and the confidence of the world market can lead small state decision makers to put their domestic credibility on the line in order to solve a trade or finance crisis (Sundelius, Stern, and Bynander, 1997: Chapter 5; Vaarik, 1999; Lase, 2000). With its economically vulnerable position outside the EU, Iceland is faced with a dilemma when confronted by an international trade or financial crisis.

This leads us to ask the following question about Icelandic crisis management:

- *Do international concerns trump domestic ones when a value conflict arises in a crisis between international demands and domestic public opinion?*

### *Learning from Crises*

Organizational learning under normal circumstances is a complex venture in and of itself. The high degree of uncertainty and ambiguity inherent in crises, and the political pressure directed at organizations handling a crisis, may seriously impair efforts to draw lessons and implement changes. Paradoxically, the need for the public sector to learn is often seen as most important in turbulent times (Dekker and Hansen, 2004).

Research has revealed that transitional states' ability to learn from crises has been mixed. Estonia, which virtually created its administration from scratch after independence in 1991, has shown tendencies of "hyper learning" by reinventing its crisis management strategy after almost every crisis (Stern and Nohrstedt, 1999:233). Russia, on the other hand, which has kept much of its basic administrative structure despite big political changes, has identified lessons from its many recent crises but has proven to be less able to implement changes based on these lessons (Porfiriev and Svedin, 2002:275–277). Based on the four dimensions of crisis learning characterized by Dekker and Hansen (2004), open and stable democracies are more likely than states in transition to do well on "producing information, drawing lessons and disseminating information" for learning. Like many western democracies, Iceland has a well-developed system of independent commissions that investigate major events and have a set of procedures for communicating their findings to the public and the appropriate organizations. Stable democracies, such as Iceland, may encounter more problems in what Dekker

<sup>8</sup> For a discussion of the two-level game that foreign policy decision makers face, see Putnam (1988).

and Hansen (2004) call the fourth dimension “the institutionalization of lessons identified.” Because the norms, procedures and perceptions of organizations in stable administrative systems are likely to be more internalized by the individuals who work there than in transitional countries, countries like Iceland may have a harder time implementing changes and institutionalizing changes.

In line with these arguments, we pose the following question about Iceland, as a mature democratic state:

- *Does Iceland have well developed procedures for extracting information, evaluating crisis management, and communicating the findings well, but face problems in the implementation/institutionalization phase due to bureaucratic infighting and institutional resistance?*

### *Summary of research questions on crisis management in Iceland*

#### **Icelandic Crisis Management System Characteristics:**

- Does Iceland use primarily informal networks of communication, and informal and pragmatic decision making during crises?
- Does the expected high level of familiarity among Icelandic officials facilitate the crisis management effort by speeding up the decision-making process, enabling informal authorization, and providing high levels of trust for collective administrative actions?
- Does the Icelandic administrative system emphasize centralization rather than decentralization in responding to crises in order to facilitate coordination and resource mobilization?
- Do Icelandic communities have a high level of preparedness due to the frequency and risk of disasters?
- Is Iceland following the developments in key external environments (like the EU and the US) closely, and has the administration developed reporting mechanisms that will enable the government to detect signs of potential threats in these areas and quickly mobilize mitigative responses to developing crises?
- Does Iceland’s small administration, with a greater degree of familiarity among decision makers and relatively short channels of information in the administration as a whole, create clear information processing in crises?
- Does Iceland pursue negotiated solutions rather than a confrontational response to crises when it is facing another state or set of states?
- Does Iceland ally itself with the other Nordic countries, in line with the tradition of policy coordination, when facing crises with the EU?
- Do international concerns trump domestic ones when a value conflict arises in a crisis between international demands and domestic public opinion?

#### **Potential Strong Points:**

- Is there a clear division of authority and responsibility among the different levels of government?

- Are there clear mechanisms for upscaling and downscaling responses within this system based on the ample experience and opportunities for fine-tuning things the civil defense sector has experienced?
- Does Iceland have well-developed detection and early warning systems for natural disasters (such as earthquakes, fires, floods, storms)?
- Does the high visibility of Icelandic state officials and private companies' relative importance in Iceland promote cooperation between public and private actors in crises, even in situations where no formal relationship has been established?
- Does Iceland have well developed procedures for extracting information, evaluating crisis management, and communicating the findings well, but face problems in the implementation/institutionalization phase due to bureaucratic infighting and institutional resistance?

#### **Potential Vulnerabilities:**

- Do the scarcity of resources in the Icelandic administration and the shadow of future budget negotiations generate bureaucratic infighting and blame games in times of crises?

With these questions as a point of departure and a basis for comparison, the following chapters present case studies of Icelandic crisis management. We revisit these questions in the concluding chapter to determine the extent to which the empirical evidence supports or contradicts them and to develop propositions for a broader analysis of crisis management in small states.

### *References*

- Allison, G. T., and P. Zelikow (1999) *Essence of Decision: Explaining the Cuban Missile Crisis*. Boston: Little Brown.
- Axelrod, R. (1984) *The Evolution of Cooperation*. New York: Basic Books.
- Barston, R., Ed. (1973) *The Other Powers: Studies in the Foreign Policy of Small States*. London: Allen and Unwin.
- Bernhardsdottir, A. E. (2001) *Learning from Past Experiences: The 1995 Avalanches in Iceland*. Stockholm: The National Defense College of Sweden.
- Bernhardsdottir, A. E. and G. H. Kristinsson (2003) "Kúltúrkenning um áfallastjórnun." [Crisis Management and Cultural Theory] *Rannsóknir í félagsvísindum IV* [Research in Social Sciences IV]. Reykjavik: The University Press.
- Billings, R., and C. F. Hermann (1998) "Problem Identification in Sequential Policy Decision Making: The Re-representation of Problems." In *Problem Representation in Foreign Policy Decision Making*, edited by D. Sylvan and J. Voss. Cambridge: Cambridge University Press.
- Breslauger, G., and P. Tetlock, Eds. (1991) *Learning in U.S. and Soviet Foreign Policy*. Boulder, CO: Westview Press.
- Buzan, B. (1991) *People, States, and Fear: An Agenda for International Security Studies in the Post-Cold War Era*. Boulder, CO: Lynne Rienner.

- Buzan, B.; O. Wæver; and J. De Wilde (1998) *Security: A Framework of Analysis*. Boulder, CO: Lynne Rienner.
- Bynander, F. (2003) *The Rise and Fall of the Submarine Threat: Threat Politics and Submarine Intrusions in Sweden 1980–2002*. 153. Statsvetenskapliga Foreningen i Uppsala [The Political Science Society in Uppsala]: Uppsala, Sweden.
- Dekker, S., and D. Hansen (2004) Learning Under Pressure: The Effects of Politicization on Organizational Learning in Public Bureaucracies. *Journal of Public Administration Research and Theory*. **14**, 2: 211–230.
- East, M. (1975) “Size and Foreign Policy Behavior: A Test of Two Methods.” In *International Events and the Comparative Analysis of Foreign Policy*, edited by C.W. Kegley, G. A. Raymond, R. M. Rood, and R. A. Skinner. Columbia: University of South Carolina Press.
- Egeberg, M. (2003) “The Nordic Countries and the EU: How European Integration Integrates and Disintegrates States Domestically.” ARENA Working Papers, No. 11, Oslo: University of Oslo. www.arena.uio.no (retrieved 19 February 2004).
- Farnham, B. (1998) *Roosevelt and the Munich Crisis: A Study of Political Decision-making*. Princeton, NJ: Princeton University Press.
- Follesdal, A. (2002) “Rawls in the Nordic Countries.” ARENA Working Papers, No. 15, www.arena.uio.no (retrieved 19 2004).
- George, A. (1980) *Presidential Decision Making in Foreign Policy: The Effective Use of Information and Advice*. Boulder, CO: Westview Press.
- Geser, H. and F. Hopfinger (1975) “Problems of Structural Differentiation in Small Societies: A Sociological Contribution to the Theory of Small States and Federalism.” *Bulletin of the Sociological Institute of the University of Zurich*. Vol. 3, pp. 59–64.
- Haney, P. J. (1997) *Organizing for Foreign Policy Crises: Presidents, Advisers and the Management of Decision Making*. Ann Arbor: University of Michigan Press.
- ’t Hart, P.; E. Stern; and B. Sundelius (1998) Crisis Management: An Agenda for Research and Training in Europe. *Cooperation and Conflict*. **33**(2): 207–224.
- Henry, R. A. (2000) *The Complete Guide to Crisis and Risk Communications ... You’d Better Have a Hose If You Want to Put Out the Fire: Professional Tips, Tactics, Dos, Don’ts and Case Histories*. Windsor, CA: Gollywobbler Productions.
- Hermann, M. G.; C. F. Hermann; and J. Hagan (1987) “How Decision Units Shape Foreign Policy Behavior.” In *New Directions in the Study of Foreign Policy*, edited by C. F. Hermann, C. W. Kegley and J. N. Rosenau, pp. 309–338. Boston: Allen and Unwin.
- Ingebritsen, C. (2002) “Norm Entrepreneurs: Scandinavia’s Role in World Politics.” *Cooperation and Conflict*. **37**(1): 11–23.
- Janis, I. L. (1982) *Groupthink: Psychological Studies of Policy Decisions and Fiascoes*, 2<sup>nd</sup> ed. Boston: Houghton Mifflin.
- Janis, I. L., and L. Mann (1977) *Decision Making: A Psychological Analysis of Conflict, Choice, and Commitment*. New York: Free Press.
- Katzenstein, P. (1985) *Small States in World Markets: Industrial Policy in Europe*. Ithaca, NY: Cornell University Press.
- Kautto, M.; J. Fritzell; B. Hvinden; J. Kvist; and H. Uusitalo, Eds. (2001) *Nordic Welfare States in the European Context*. London and New York: Routledge.
- Keeney, R. (1992) *Value Focused Thinking*. Cambridge, MA: Harvard University Press.
- Khong, Y. F. (1992) *Analogies at War*. Princeton, NJ: Princeton University Press.

- Kokk, M. (1999) "Refugee Crisis in Estonia: 1994–1995." In *Crisis Management in Estonia: Theory and Practice*, edited by E. Stern and D. Nohrstedt, pp. 111–132. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Lagadec, P. (1997) Learning Processes for Crisis Management in Complex Organizations. *Journal of Contingencies and Crisis Management*. 5(1): 24–31.
- Lagerspetz, M. (2003) How Many Nordic Countries?: Possibilities and Limits of Geopolitical Identity Construction. *Cooperation and Conflict*. 38(1): 49–61.
- Larson, D. W. (1985) *The Origins of Containment: A Psychological Explanation*. Princeton, NJ: Princeton University Press.
- Lase, I. (2000) "The Bankruptcy of Banka Baltija." In *Crisis Management in a Transitional Country: The Latvian Experience*, edited by E. Stern and D. Hansen, pp. 260–296. Stockholm: The National Defense College of Sweden.
- Lebow, N. (1981) *Between Peace and War: The Nature of International Crises*. Baltimore, MD: Johns Hopkins University Press.
- Levy, J. (1991) "The Role of Crisis Management in the Outbreak of World War I." In *Avoiding War: The Problems of Crisis Management*, edited by A. L. George, pp. 62–102. Boulder, CO: Westview Press.
- Levy, J. (1994) "Learning and Foreign Policy: Sweeping a Conceptual Minefield." *International Organization*. 48(2): 279–312.
- Lowi, T. (1972) "Four Systems of Policy, Politics and Choice." *Public Administration Review*. 32(4): pp. 298–310.
- Nohrstedt, S. A., and A. Tassew (1993) "Communication and Crisis: An Inventory of Current Research." *Psykologiskt försvar* [Psychological Defense]. Report no. 163:1.
- Nordlund, R. (1994) "A Triangle Drama: Authorities, Citizens and Media in Crisis." *Psykologiskt försvar* [Psychological Defense]. Meddelande no 136:b.
- Olson, M. (1982) *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven, CT: Yale University Press.
- Papadakis, M and H. Starr (1987) "Opportunity, Willingness and Small States: The Relationship Between Environment and Foreign Policy." In *New Directions in the Study of Foreign Policy*, edited by C. Herman, C. Kegley and J. Rosenau, pp.409–32 . London: Allen and Unwin.
- Pearce, D. D. (1995) *Weary Partners: Diplomats and the Media*. Washington, DC: Congressional Quarterly.
- Pierson, P. (1993) When Effect Becomes Cause: Policy Feedback and Political Change. *World Politics*. 45: 594–628.
- Porfiriev, B., and L. Svedin, Eds. (2002) *Crisis Management in Russia: Overcoming Institutional Rigidity and Resource Constraints*. Stockholm: The National Defense College of Stockholm.
- Putnam, R. (1988) "Diplomacy and Domestic Politics: The Logic of Two-Level Games." *International Organization*. 42:427–460.
- Rapaport, J.; E. Muteba; and J. Therattil (1971) *Small States and Territories*. New York: Arno.
- Regester, M., and J. Larkin (1998) *Risk Issues and Crisis Management: A Casebook of Best Practice*. London: Institute of Public Relations.
- Reid, G.L. (1974) *The Impact of Very Small Size on the International Behavior of Microstates*. Beverly Hills, California: Sage Publication.



- Rosati, J. A. (1981) Developing a Systematic Decision-Making Framework: Bureaucratic Politics in Perspective. *World Politics*. **33**(2): 234–252.
- Rosenthal, U.; P. 't Hart; and A. Kouzmin (1991) The Bureau-Politics of Crisis Management. *Public Administration Review*. **69**: 211–233.
- Runcis, A. (2000) "The Citizenship Issue as a Creeping Crisis." In *Crisis Management in a Transitional Society: The Latvian Experience*, edited by E. Stern and D. Hansen, pp. 61–97. Stockholm: The National Defense College of Sweden.
- Skocpol, T. (1992) *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States*. Cambridge, MA: Harvard University Press.
- Snyder, R. C.; H. Bruck; and B. Sapin (1963) *Foreign Policy Decision Making*. New York, NY: Free Press.
- Statistics Iceland (2004) "Key Figures." <http://www.hagstofa.is> (retrieved 23 February 2004).
- Steinbrunner, J. (1974) *The Cybernetic Theory of Decision*. Princeton, NJ: Princeton University Press.
- Steinbrunner, J. (2000) *Principles of Global Security*. Washington, DC: Brookings Institution.
- Stern, E. (1999) *Crisis Decision Making: A Cognitive-Institutional Approach*. Stockholm: Stockholm University.
- Stern, E., and F. Bynander, Eds. (1998) *Crisis and Internationalization*. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Stern, E., and D. Hansen, Eds. (2000) *Crisis Management in a Transitional Country: The Latvian Experience*. Stockholm: The National Defense College of Sweden.
- Stern, E., and D. Nohrstedt, Eds. (1999) *Crisis Management in Estonia: Theory and Practice*. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Stern, E., and B. Sundelius (1997) "Sweden's Twin Monetary Crisis of 1992: Rigidity and Learning in Crisis Decision Making." *Journal of Contingencies and Crisis Management*. **5**(1): 32–48.
- Stern, E., and B. Sundelius (2002) "Crisis Management Europe: An Integrated Regional Research Program." *International Studies Perspective*. **3**, pp. 78–80.
- Stern, E., and B. Verbeek, Eds. (1998) Wither the Study of Governmental Politics in Foreign Policymaking: A Symposium. *Mershon International Studies Review*. **42**: 205–255.
- Stewart, P.; C. F. Hermann; and M. G. Hermann (1989) Modeling the 1973 Soviet Decision to Support Egypt. *American Political Science Review*. **83**(1): 35–59.
- Sundelius, B. (1995) "Sverige bortom småstatsbindningen: litet men smart i ett internationaliserat Europa" [Sweden beyond the small state connection: Small but smart in an internationalized Europe]. *Utvidgning och Samspel* [Expansion and Collaboration], pp. 61–85. SOU 1995:132. Stockholm: Ministry for Foreign Affairs.
- Sundelius, B.; E. Stern; and F. Bynander (1997) *Krishantering på svenska: teori och praktik* [Crisis Management the Swedish Way: Theory and Practice]. Stockholm: Nerenius & Santerus Forlag.
- Sylvan, D., and J. Voss, Eds. (1998) *Problem Representation in Foreign Policy Decision Making*. Cambridge: Cambridge University Press.
- Thorhallsson, B. (2002) *The Role of the Small States in the European Union*. Aldershot: Ashgate.

- Vaarik, D. (1999) "Economic Overheating in Estonia: 1997." *Crisis Management in Estonia: Case Studies and Comparative Perspectives*, edited by Eric K. Stern and Daniel Nohrstedt, pp. 193–217. Stockholm: The Swedish National Defense College.
- Vertzberger, Y. I. (1990) *The World in Their Minds: Information Processing, Cognition, and Perception in Foreign Policy Decisionmaking*. Stanford, CA: Stanford University Press.
- World Bank Group (April 2000) "More on What Makes Small States Different?" Text extracted from *Small States: Meeting Challenges in the Global Economy*. Washington DC and London: Commonwealth Secretariat, World Bank Joint Task Force on Small States. [http://wbln0018.worldbank.org/html/smallstates.nsf/\(SmallStateslookup1\)/Whatmakesmallstates?OpenDocument](http://wbln0018.worldbank.org/html/smallstates.nsf/(SmallStateslookup1)/Whatmakesmallstates?OpenDocument) (retrieved 9 December 2003).





# Chapter 2

## Crisis Management and the Icelandic Context

*Asthildur Elva Bernhardsdottir and Gunnar Helgi Kristinsson*

### *Historical, Institutional and Political Context*

Before the middle of the nineteenth century Icelanders had begun their campaign for increasing rights for self-determination. In 1904 changes in the constitution gave them home rule and parliamentary democracy, and in 1918 the Act of Union made Iceland a sovereign state in a union with Denmark (Kjartansson, 1996). That union was effectively severed because of the German invasion of Denmark during WWII. Parliament responded by investing the Icelandic cabinet with the power of the Head of State and declaring that Iceland should accept full responsibility for foreign affairs and coastal surveillance (Icelandic Parliament, 2002). From this point, the Icelandic nation state took full responsibility for managing its own crises.

Crisis management in Iceland originally developed in a haphazard fashion where various voluntary organizations played a major role. The original impetus came from the fisheries and sea-faring sector, which through the ages had taken a considerable toll of the population. The industrialization of the fisheries sector in the early twentieth century led to economic growth, but also- unfortunately – more frequent casualties at sea. Voluntary associations were established to guard the threat of sea accidents and to manage rescue operations.

The oldest volunteer rescue unit (the Westman Islands Rescue Association) was founded in 1918, and the National Life-Saving Association of Iceland was established in 1928 with the aim of preventing the all too frequent accidents at sea. In a relatively short time the National Life-Saving Association became a strong social movement in Iceland with rescue teams all around the country. Along with rapid social changes stretching over time, the association took over increasingly more aspects of rescue operations and the prevention of accidents both on land and at sea (Arnalds, 2000).

### *Civil Defense*

The inception of civil defense in Iceland was made through legislation establishing Air Raid Committees in 1941. The committees were for the most part ineffective except for the Reykjavík Committee, which installed air raid sirens, collected emergency supplies and planned for the evacuation of the sick, the elderly, women and children in the event of an air raid on the capital (AVRIK, N.d.).

Iceland became a republic with the dissolution of the union with Denmark in 1944. At that time the country had only around 100,000 inhabitants and, like today, no armed forces of its own. This uniqueness did not stand in the way of Iceland becoming a founding mem-

ber of NATO (North Atlantic Treaty Organization) in 1949. In 1951 a defense agreement was made between Iceland and the United States, which allowed the US to have a military base in Iceland. In return, the US would contribute these forces to NATO in the event of a war (Jonsson, 1989).

Governing the risk of war was the main concern of many nations during the Cold War. The Cuban crisis in 1962 brought up the need for a civil defense program in Iceland in order to provide protection of the population. The Icelandic Parliament passed the Act of National Organized Civil Defence, establishing the organization, function and authority under which the civil defense would operate.

The Act of National Organized Civil Defence was established on December 29, 1962 with the purpose to “organize and implement measures in order to prevent bodily harm to the public or damage to property caused by military action” (Icelandic Parliament, 1962a). Thereafter, various measures were implemented including technical training for personnel, the acquisition of specialized supplies and equipment, the analysis of existing buildings to determine their inherent protection factor against radioactive fallout, and a proposed design of an emergency operation center for the National Civil Defence Organization (AVRIK, N.d.).

### *Disaster Planning and Preparedness*

As the cold war progressed, the Icelandic civil defense program evolved. Increased attention was given to utilizing the civil defense structure and resources for situations that endangered lives and property (i.e., natural disasters or other catastrophic occurrences). For nearly eleven hundred years epidemics, avalanches, floods, volcanoes, earthquakes and other hazards have directly or indirectly put thousands of people in Iceland in danger (AVRIK, N.d.).

In 1963, in the wake of the volcanic eruption on the island of Surtsey (south of the mainland), scientists evaluated the risk of an eruption on the island of Heimaey (about 20 km NE of Surtsey) to be rather high. The National Civil Defence Agency (AVRIK) was made responsible for making an emergency plan including instructions on how to evacuate the island in the event of a disaster.

In accordance with the new emphasis on civil defense assistance during natural disasters or other dangers, the Act of National Organized Civil Defence was changed in 1967 into the following:

The task of civil defense consists 1) of organizing and implementing measures to prevent, as much as possible, bodily harm to the public or damage to property caused by military action, natural disasters or other hazards, and 2) of rendering relief and assistance on account of any loss which has occurred... (Icelandic Parliament, 1962b).

In 1967 the United Nations Office of Technical Cooperation announced the inauguration of a new program to provide technical assistance for the development of disaster programs to one member nation. The Government of Iceland submitted an application and was chosen as the first country to receive such assistance. The United Nations selected, with the concurrence of Iceland, a disaster expert from the United States to lead the development effort (AVRIK, N.d.).

The initial five-month phase of the project was commenced in early 1971 with an analysis of disaster hazards, the identification of indigenous resources available during disasters,

and the training of Icelandic personnel in mastering the technique of disaster organization and planning. This was followed by the commencement of disaster planning at both the national and local levels (AVRIK, N.d.).

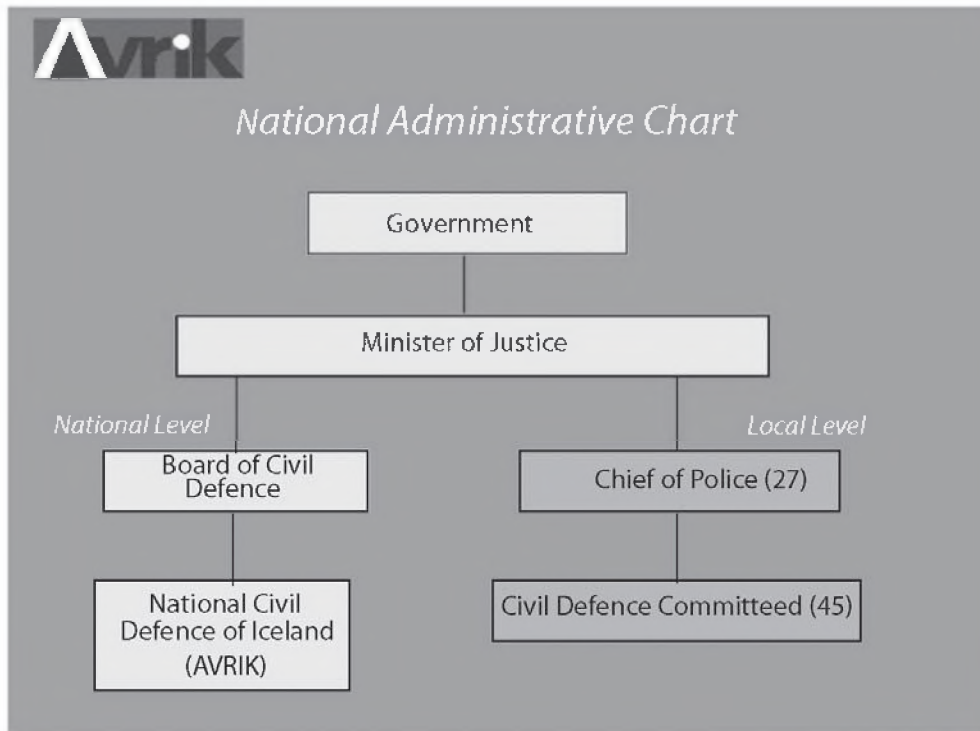
The second phase of the project occurred in early 1973 and consisted principally of reviewing the progress of the program and solving problems that had not been anticipated in the initial phase. This phase was originally scheduled to be one month, but was extended for a second month due to a disastrous volcanic eruption on the island of Heimaey at that time. The National Civil Defence Agency organized a mass registration of the people on the island, provided care for them, and transported them to the mainland. Much was learned from this disaster operation and it was used to make additional directives to the civil defense program. It also increased public awareness to the need for civil defense and strengthened political support for the disaster program (AVRIK, N.d.).

### *The Civil Defense Structure in Iceland*

Recently the Civil Defence Act was amended and the National Civil Defence Agency [Almannavarnir ríkisins – AVRIK] was disbanded. Its responsibilities were entrusted to the National Commissioner of the Icelandic Police (National Commissioner of the Icelandic Police, 2003). Since those changes were made after the crises analyzed in this volume, AVRIK remains the focus in the outline of the civil defense structure.

The Minister of Justice is in charge of the country's civil defense. She/he appoints the Civil Defence Council, which consists of the Director General of the Icelandic Coast Guard (Chairperson), the General Manager of the Icelandic Telecommunication Company, the Chief Medical Officer of Health, the National Commissioner of Police, and the Commissioner of Roads. The representative of the Minister of Justice is the Secretary of the Council. The rescue organization (now ICE-SAR) and the Red Cross each have one observer on the Civil Defence Council with the right to present their opinions and offer suggestions, but do not have the right to vote (Bernhardsdottir, 2001). The National Civil Defence Agency, AVRIK, consisted of six people when the crises studied in this volume occurred. At that time, the Director of AVRIK was also the Director of the Civil Defence Council.

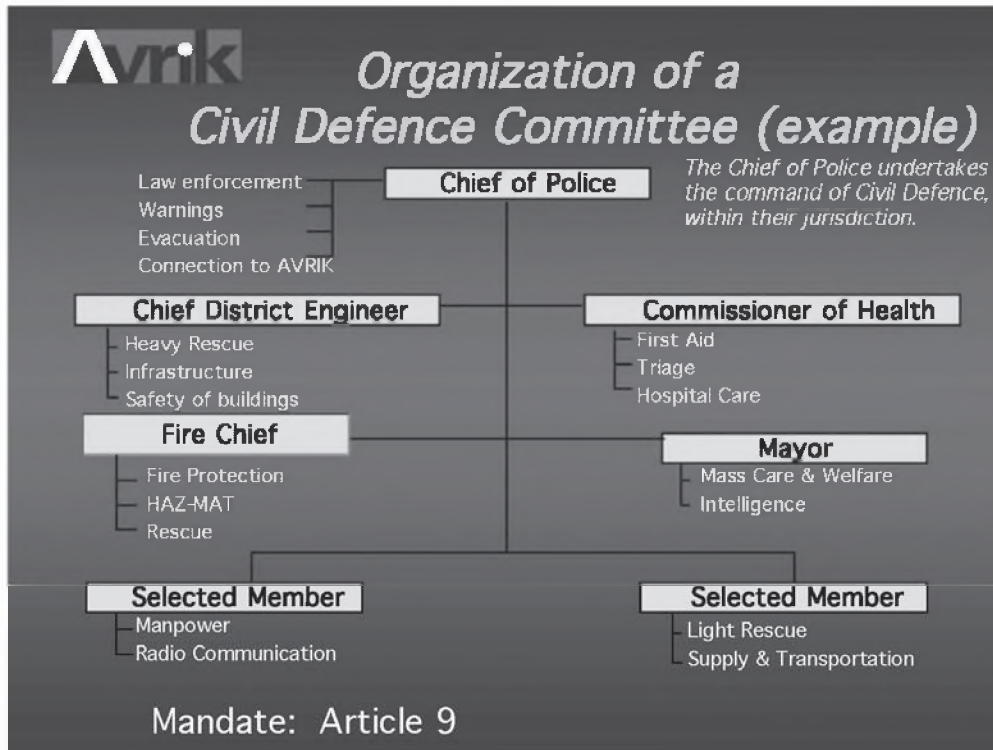
Figure 1



Source: AVRIK, 2002.

There are Civil Defence Committees in every community. Their administration is in the hands of the local communities but during a disaster the Chief of Police is in command of the operations. The committees are constituted by law in the same manner as the Civil Defence Council. These committees consist of the Mayors, construction surveyors, town engineers, district medical officers, and the Directors of the Fire Brigade. The committees were completely independent from AVRIK and were under the jurisdiction of the Minister of Justice. It was the duty of AVRIK, though, to monitor and advise these Civil Defence Committees without directly controlling them (Bernhardsdottir, 2001). The National Commissioner of the Icelandic Police has now taken over AVRIK's tasks but the structure of civil defense has remained intact in other aspects. As a consequence, the Civil Defence Committees are independent from the National Commissioner of the Icelandic Police.

Figure 2:



Source: AVRIK, 2002

It should be noted that the part of civil defense pertaining to medical services is under the authority of the Minister of Health.

The National Civil Defence (now National Civil Protection) operates in six fields: Risk Analysis, Mitigation, Coordination, Operations, International Relations, and Administration. Coordination has been the most extensive field of the National Civil Defense, as it needs to ensure cooperation of many institutions, associations, rescue teams and communities.

### *The Role of Volunteer Organizations*

The National Life Saving Association – which is mentioned above – became an important social movement in a relatively short time with rescue teams in all parts of the country. Its activities were expanded and it continues to play a major role in many aspects of accident prevention and rescue operations in Iceland, both on land and at sea.

The oldest volunteer rescue unit is the Westman Islands Rescue Association, founded in 1918. The National Life-Saving Association of Iceland and its first association units were founded in 1928 (ICE-SAR, 2003).

Another fundamental volunteer organization is the Icelandic Red Cross (IRC), which was founded in 1924. The IRC is an important humanitarian organization in Iceland.



Throughout its history it has enjoyed tremendous public support and has played a pioneering role in many areas of health care, social work and education. The organization has steadily grown and today has around eighteen thousand members and volunteers working in 51 branches all around the country (Icelandic Red Cross, 2003).

An agreement was made between the National Civil Defence and the country's volunteer organizations in 1974 regarding certain civil defense matters (mainly work tasks). These organizations include the Icelandic Red Cross and the rescue team's organization (now, the Icelandic Association for Search and Rescue, ICE-SAR, ICE-SAR). The IRC was given the responsibility of mass social assistance, but the rescue team's organization is in charge of rescue missions and providing first aid.

In 1985 the rescue teams established a formal structure to organize search missions. This involved dividing the country into eighteen zones, each governed by a local board. The National Directorate coordinates operations and any major search and rescue events that occur in more than one zone at a time. In November 1995 a new agreement was signed giving the National Directorate of Rescue Teams the responsibility for coordinating all activities of the rescue teams during operations in the name of civil defense throughout Iceland as well as for providing the workers with transportation, housing and other necessities related to the rescue operation. Since the National Life-Saving Association of Iceland and the National Scout Rescue Troops (Landsbjörg) merged in October 1999, all of the rescue teams now belong to one association (that is, the Icelandic Association for Search and Rescue, ICE-SAR) (Bernhardsdottir, 2001). The number of volunteer units forming the association is about 100 rescue teams, and they are located throughout Iceland. They comprise over 4,000 volunteers who are always on standby for emergencies (ICE-SAR, 2003).

Since there is no Icelandic army, the importance of the volunteer rescue teams in the country is indisputable. Thousands of Icelanders are constantly on stand-by (on an entirely voluntary basis) and ready with little or no notice to go out on rescue missions whatever the conditions may be. These units practice regularly and – given the rather harsh climate – are frequently called upon for rescue or search missions.

### *Cooperation with Other Countries*

Iceland joined the United Nations in 1946 which, as mentioned earlier, supported the development of a disaster program for the country. Ever since then a strong relationship has existed between the UN and Iceland concerning disaster management.

The National Civil Defence Agency (now National Civil Protection) is a member of various committees devoted to international cooperation and takes part in such work as much as possible depending on its capacity and priorities. Active international cooperation is first and foremost between the Nordic countries. Icelandic representatives annually attend a Directors' Meeting of the Nordic National Civil Defences. The National Civil Defence representative attends the meetings of the NATO National Civil Defense Committee, receives situation reports from international institutions about preparations for dangerous and emergency situations all over the world, and is the mobilization center for the Icelandic members of the United Nations Disaster Assessment and Coordination Team (UNDAC). The institution has a growing relationship with the European Commission (AVRIK, 2002).

Iceland has a permanent delegation to the Organization for Security and Co-operation in Europe. The organization is active in early warning, conflict prevention, crisis management, and post-conflict rehabilitation (OSCE, 2003).

Partnership for Peace (PfP) is the basis for practical security cooperation between NATO and the individual partner countries. Activities include defense planning and budgeting, joint military and civilian exercises, and civil emergency operations. Iceland has contributed to PfP by managing exercises in Iceland in 1997, 2000 and 2002. The aim of the exercises was to improve cooperation and coordination of the member state efforts in, among other things, disaster management (NATO, 2003).

### *Conclusion*

Despite increased professionalization in the Icelandic civil defense system, it still largely remains a volunteer system. At the national level, the nucleus of a professional civil defense organization has emerged, but at the local level the system still relies to a significant extent on voluntary organizations. This – along with the often unclear lines of command – sometimes complicates the operations of the system during crises.

### *References*

- Arnalds, E. S. (2001) *Mannslíf í húfi: Saga Slysavarnáfélag Íslands*. [Human Lives at Stake: The History of the National Life-Saving Association of Iceland]. Reykjavík: Mál og Mynd.
- AVRIK (Almannavarnir ríkisins) [National Civil Defence of Iceland]. 2002. “Civil Protection in Iceland.” (English version). <http://www.avrik.is> (12 November 2002)
- AVRIK (Amannavarnir ríkisins) [National Civil Defence of Iceland]. (N.d.). Unpublished report.
- Bernhardsdóttir, A. E. (2001) *Learning from Past Experience: The 1995 avalanches in Iceland*. Stockholm: Swedish National Defence College.
- Icelandic Parliament (1962a) Parliamentary Directive 94/1962: A Parliamentary Directive on Civil Defense.
- Icelandic Parliament (1962b) Parliamentary Amendment 94/1962 (No 30/1967) A Parliamentary Amendment to the Civil Defence Law.
- Icelandic Parliament. 2002. “Althingi Introduction: Working and History.” <http://www.althingi.is/ekysag/> (10 November 2002).
- Icelandic Red Cross [Rauði kross Íslands] (2003) *The Icelandic Red Cross- At home and abroad*.
- ICE-SAR (Icelandic Association for Search and Rescue). 2003. “Rescue on sea and land.” <http://www.icesar.com/> (9 November 2003).
- Jonsson, A. (1989) *Iceland, NATO and the Keflavík Base*. Reykjavík: The Icelandic Commission on Security and International Affairs.
- Kjartansson, H. S. (1996) “History and Culture.” In *Iceland – The Republic*, edited by J. Nordal and J. Kristinsson. Reykjavík: The Central Bank of Iceland. pp. 61–106.

- National Commissioner of the Icelandic Police [Ríkislögreglustjórnin]. 2003. "Civil Protection in Iceland." <http://www.almannavarnir.is/> (9 December 2003).
- NATO (North Atlantic Treaty Organization). 2003. "Nato Issues: Partnership for Peace." <http://www.nato.int/pfp/pfp.htm> (10 November 2002).
- OSCE (Organization for Security and Co-operation in Europe). 2003. General Information. <http://www.osce.org/general> (10 November 2002).



PART II  
THE CASE STUDIES



# Chapter 3

## Earthquakes in Southern Iceland: Crisis Management and Crisis Help<sup>1</sup>

*Gudny Bjork Eydal and Gudrun Arnadottir*

### *1. Introduction*

In June 2000, two major earthquakes struck southern Iceland. The area about 100 km east of the capital Reykjavik was hit hardest (Sigbjornsson, Snaebjornsson, Olafsson, Bessason, Baldvinsson and Thorarinsson, 2000). See figure 1.

The first earthquake hit on June 17, 2000 (the National Day of Iceland). According to the Icelandic Meteorological Office (IMO), the epicenter of the earthquake was in the Holt district. According to the National Earthquake Information Center (NEIC) in the USA, the magnitude was 5.7 Mb (body-wave magnitude) and 6.6 Ms (surface-wave magnitude). The aftershocks of the first earthquake indicated a vertical 16 km long northeast fault 10 km deep.

Three days after the first earthquake, on June 21, another earthquake started in Floi, just south of Mt. Hestfjall. According to NEIC, the size was 6.1 Mb and 6.6 Ms. The aftershocks indicated a vertical 18 km long fault striking two degrees northwest, 8 km deep (Stefansson, Gudmundsson and Halldorsson, 2000).

Fortunately, there were no casualties nor did the earthquakes cause any serious injuries, but a total of 250 houses were badly damaged. Other buildings, roads and constructions were also damaged. Almost all of the nation's major power plants are situated in the area, but fortunately the earthquakes did not damage them. Since the inhabitants in certain areas have for a long time expected catastrophic earthquakes, building regulations require that all constructions be built to withstand earthquakes and to minimize any danger of collapsing. Because of these building codes and the fortunate occurrence that the earthquakes hit during the National Holiday while most people were outside enjoying the celebration, only a few people suffered minor physical injuries. There were about 2,056 cases of damaged property reported, and the total damage estimates were around 2.2 billion Icelandic crowns (Icelandic Parliament, 2001-2: thingskjal 217). This amount was estimated to be 3% of Iceland's GNP in 2000 (Johannesson, 2001).

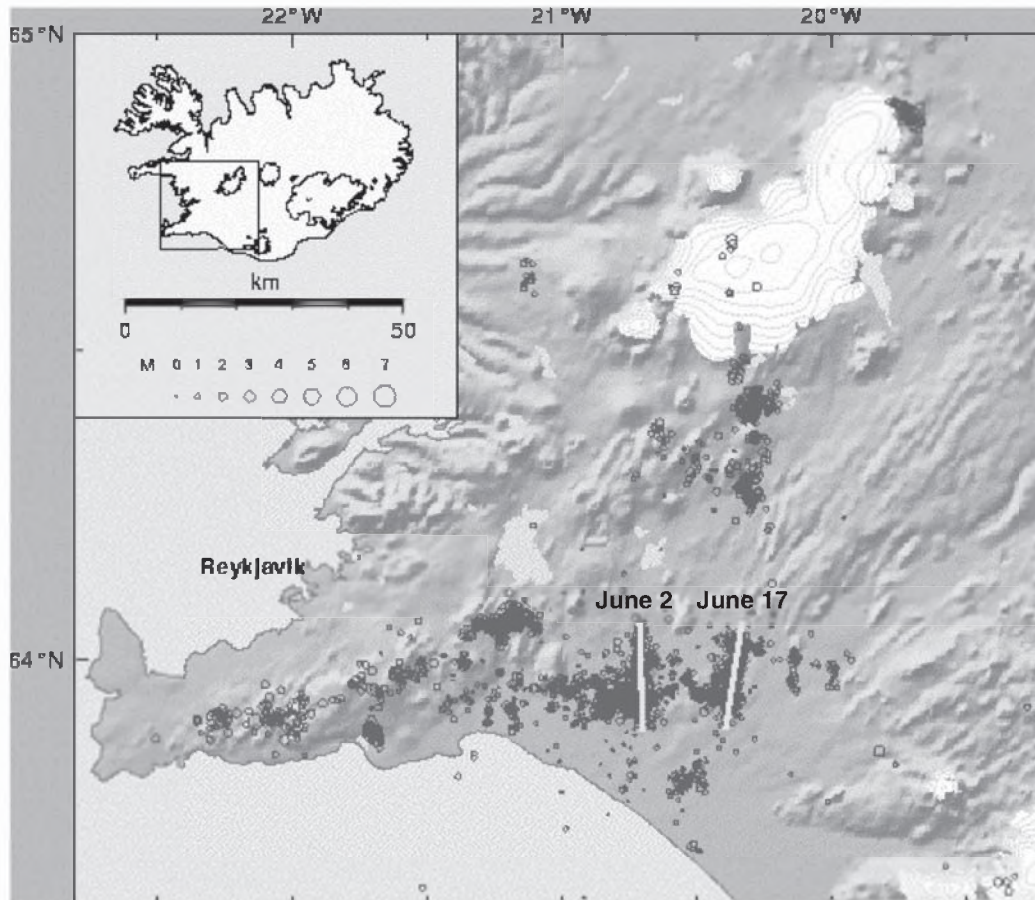
The magnitudes of the earthquakes were such that the National Civil Defense of Iceland (AVRIK) had to activate its coordination center in Reykjavik. However, considering that no one was buried in ruins and people were not seriously injured, the job of the local Civil Defense Committees (CDC) and AVRIK was much easier than in previous natural disasters. Ac-

---

<sup>1</sup> We would like to express our gratitude to our respondents all those who took time out of their busy schedules to contribute to this study; it would not have been possible without their assistance. We would also like to thank the University of Iceland for the Assistantship Fund which made it possible for us to employ Matthildur Thorarinsdottir, Cynthia Lisa Jeans and Kristin Einarsdottir. Their contribution greatly helped us. Sigurveig H. Sigurdardottir made valuable comments. Finally we would like to thank Asthildur Elva Bernhardsdottir and the members of CRIS-MART for all their encouragement and valuable comments.

According to Stern (1997), such events can be viewed as an 'easy task' since it gives an opportunity to develop defensive routines and provides valuable learning opportunities. Therefore this particular crisis has provided a very good opportunity to assess the effectiveness of the Icelandic civil defense system.

Figure 1: The thick lines show the fault planes of the two large earthquakes on June 17 and 21. The areas where aftershocks were activated are indicated with dark circles.<sup>2</sup>



In this study, the crisis management of the psychological and social crisis help provided in connection to the two earthquakes will be analyzed. The focal point of the study is the administration of the crisis intervention and of the crisis help (psychological and social support) in Rangarvalla county, in particular in the Rangarvalla municipality and the village of Hella. Studying the crisis help is of particular interest for two reasons.

Firstly, a study conducted by Bernhardsdottir (2001) on the 1995 avalanches in Iceland, revealed that some difficulties occurred in regards to administrating and planning crisis help. One of Bernhardsdottir's conclusions was that if Icelanders were to face a disaster of the same

<sup>2</sup> This figure was received from Ragnar Stefansson, Gunnar B. Gudmundsson, and Pall Halldorsson. It is used here with their permission.

scale as the 1995 avalanches, the disorganization of crisis help would still be a major handicap.

Secondly, the role of crisis help has gained increased attention and importance. Raphael (1986/2000) pointed out that there are many costs involved in the various stages of disaster response, but that one of the greatest human costs is the enormity of the psychological experience and the “scars on the mind.” “For those who go through the horrifying threat to life or the loss of loved ones, home and possessions, community, or livelihood, the emotional pain is great. And those who are involved in rescue and recovery operations may themselves confront massive death, threat and loss and share empathically with others, becoming themselves indirect victims of the disaster” (Raphael, 1986/2000:4). This increased recognition of the psychosocial influences of disasters on both victims and rescue workers has resulted in the rapid development of various schemes for crisis help.

Thus, the aim of this study is to analyze the crisis management, in particular the management of the psychological and social crisis help, after the earthquakes in the South Lowland of Iceland in June 2000.

## 1.1 DEFINITION OF A CRISIS

Sundelius, Stern and Bynander’s definition of a crisis has been used in this study. According to their definition, during a crisis the central players perceive that: 1) Important values are being threatened, 2) Limited time for decision making is available, 3) The circumstances of the crisis are marked by a deal of uncertainty (Sundelius, Stern and Bynander, 1997).

It is obvious that all of these three conditions were present during the two earthquakes in Iceland. First of all, homes and property were damaged and human lives were threatened. Secondly, the decision makers were pressed for time in assessing whether there were any casualties or individuals in danger, whether they needed to provide medical assistance, whether any public structures had been damaged, and so forth. Thirdly, there was uncertainty about the preliminary assessment, and it was unknown if and when a second major earthquake or aftershocks would hit.

## 1.2 METHODOLOGY, APPROACH AND SOURCES

This study was conducted according to the framework of the analytical approach developed by Sundelius et al. (1997). According to Sundelius and his partners:

One needs to analyze the constituent parts of these events [disasters/crisis] in the form of decisions that are made or not made, mistakes that are made, ad hoc measures that succeed, information that is misinterpreted or disregarded in order to, in the next sudden threatening situation, avoid those traps and wisely use the resources and experience that can, after all, help guide us toward a better result (Sundelius et al., 1997:5–6).

In the case of Iceland, there is limited research on crisis management. Data on the administrative processes was mainly collected by interviewing experts and those who participated in the crisis management of the two earthquakes. A total of fourteen interviews were conducted with sixteen individuals. The informants were given the opportunity to read all references

made to the interviews for their approval and were given the final draft; some of them made additional valuable comments and remarks. Without the help and support of the informants, this study would not have been possible. A crisis management evaluation of the two earthquakes is still in progress, but AVRIK and the RCCD (Rangarvalla County Civil Defense) Committee entrusted the authors of this study with some unpublished material and drafts. Many of the informants entrusted the authors with unpublished material which was of great importance in the research effort.

Originally, the research was aimed at collecting data on how the inhabitants perceived and experienced the crisis management and the crisis intervention. The intention was to collect this data by setting up focus groups among the local residents. Even though it has not been possible to fulfill this aim, the authors of this report still believe that such data is of vital importance if a holistic evaluation of the crisis management is to be conducted. The results of two studies were used to compose the perspective of the affected inhabitants: a study on the psychological reaction of earthquake survivors (Bodvarsdottir, 2001; Bodvarsdottir and Elklit, 2004) and a quantitative survey conducted by the Icelandic Red Cross (IRC) on their work during the crisis (Jonasdottir, 2001a).

The earthquakes affected two counties: Rangarvalla and Arnes. This study is, in particular, aimed at analyzing the crisis management in Rangarvalla county, which has one Civil Defense Committee. Rangarvalla county has a population of approximately 3,200 inhabitants living in a rural area: on farms and in small villages. Further analysis is conducted on the Rangarvalla municipality. This was the area that was struck hardest by the June 17<sup>th</sup> earthquake. The reason for conducting an analysis within this geographical framework was to ensure a better and more in-depth study of the crisis management of one district. In our opinion, an analysis of the crisis management in both counties (in sum the eight civil defense committees involved during the quakes) would have provided a more comprehensive view, but due to the lack of resources it was not possible to conduct such an extensive study.

### 1.3 HISTORICAL AND INSTITUTIONAL CONTEXT

Due to its location in the North Atlantic Ocean, one of Iceland's major occurring dangers is the difficult weather conditions that cause accidents on land and at sea. The island itself is geologically young. Earthquakes, volcanic eruptions and avalanches are a constant threat to the inhabitants. During the last decade Iceland was struck by a major natural disaster every fourth or fifth year (Proppe, 2000).

Iceland is located where the European and the American plates meet, and the movement of the plates creates tensions that produce earthquakes. The island has a history of destructive earthquakes and during the 20<sup>th</sup> century, earthquakes have damaged settlements in the South Lowland as well as areas in the north. Examination of historical data has revealed that the South Lowland is the most active seismic area in northwest Europe (Sigbjornsson et al., 1998).

Major earthquakes have been predicted in the southern part of the island for the past ten years or so, but historical data reveals that major earthquakes have struck this area only about once every century over the past 1000 years (Stefansson et al., 2000; Thoroddsen, 1905). Because of this knowledge, the inhabitants of the South Lowland were already aware of this possibility and had prepared, to some extent, for the earthquakes.



## 1.4 CIVIL DEFENSE

The Icelandic Civil Defense was established by law in 1962. According to Bernhardsdottir the original aim was that the Civil Defense would be activated during a military conflict, but in 1967 the decree was changed so that the Civil Defense could also assist during natural catastrophes and other disasters.

In connection to this amendment, work began on constructing an emergency defense system. The first comprehensive emergency plan was made in 1971. Today, emergency plans have been worked out for all inhabited districts in the country. Since 1971, the Civil Defense has been called upon to assist and to lead emergency operations in various natural catastrophes (namely, volcanic eruptions, avalanches, earthquakes and floods) (Bernhardsdottir, 2001:3).

Civil Defense in Iceland is under the Ministry of Justice and operates on the national and local levels. On the national level, the National Civil Defense of Iceland (AVRIK) performs the tasks required on behalf of the Ministry during rescue operations. It had a staff of five people in June 2000 at the time of the earthquakes. (See Chapter 1 of this volume for a further description of the Icelandic Civil Defense.)

The local level is divided into 26 police jurisdictions. The Chief of Police is in charge of civil defense operations within the area. Civil defense committees are defined within the jurisdictions. In some jurisdictions there is more than one committee, but in Rangarvalla county there is only one. Besides the Chief of Police, there is a fire chief, a doctor, a building engineer and three representatives nominated from the three largest municipalities in the region on the committee (as stated in AVRIK's law "Log um almannavarnir nr. 94/1962 m.s.b"). Thus the system of civil defense in Iceland is an operational plan that is activated in time of crises. Once the operational plan is set in motion, then the system of emergency services (like the police, fire brigade, rescue teams, medical care, coast guard, emergency hotline, the Icelandic Red Cross, public servants and other actors) is activated. If the local civil defense committees are unable to take on the administrative role or if the task is of such degree that coordination between different districts is needed, then the AVRIK coordination center is activated. If further assistance is needed from other countries, AVRIK has the task of coordinating it.<sup>3</sup>

Over the past decades, AVRIK has made contracts with the Icelandic Association for Search and Rescue (ICE-SAR) and the Icelandic Red Cross (IRC) for special assignments in search and rescue (such contracts are also made at the local level). Thus volunteerism plays a significant role in civil defense operations in Iceland. The ICE-SAR has about 100 rescue teams located throughout the country. About 4000 volunteers are specially trained for rescue on land and at sea and are on standby for emergencies. The total membership of the ICE-SAR is about 22,000, which is around eight percent of the population (Birgisson, 2000).

The IRC has about 2000 specially trained members and the total IRC membership is about 18,000, or around six percent of the total population. According to the contract with AVRIK, the role of the IRC is to provide mass care and social assistance, including management of relief centers and the provision of temporary housing. The IRC is also in charge of

---

<sup>3</sup> The Office of Coordination for Humanitarian Affairs and some other foreign civil defense units contacted AVRIK after the two earthquakes in 2000 but no assistance was needed.



first-aid education in Iceland, producing materials and making sure that the latest techniques are used. Another objective of the IRC is to offer effective PFA/PS (psychological first aid/psychological support) to victims of disasters in Iceland and to train a sufficient number of PFA instructors who can then instruct volunteers (Icelandic Red Cross, 2001; Jonasdottir 2001b)<sup>4</sup>.

In 1999 the IRC set up a cross professional-volunteer psychological support crisis team of twenty-five experts. The support team was created because the IRC was interested in improving their crisis help services, in particular their services for children and teenagers of which there was a lack. In addition the IRC received a request from the Icelandic Psychological Society who wanted to cooperate on establishing a crisis team for children and teenagers. Psychologists, ministers, nurses, social workers and other professionals (all of whom have experience in working with children and teenagers) joined the crisis team (Jonasdottir, 2001a).

Both the IRC and the ICE-SAR have based their activities on the participation of volunteers. Erlendsson (2001), Head of the local Red Cross branch in Rangarvalla county, stated that there was no lack of Red Cross volunteers during the aftermath of the earthquakes; although now, in general, it is difficult to activate people in the movement. Due to the lack of research, it is difficult to explain if this is true in the wider context (Juliusdottir and Sigurdardottir, 1997).

According to the laws on civil defense, all health services are under the administration of the Directorate of Health in Iceland (AVRIK, 1962: Lög um almannavarnir nr. 94/1962 m.s.b.) and according to the Director of AVRIK, crisis help has been defined as a health service. Two specialized teams in psychological crisis help have been established at the National University Hospital (LSH) in Fossvogur, Reykjavik. One team works at the Center for Post-traumatic Intervention in the emergency care unit. The second team is the Disaster Mental Health Team (DMHT), which is activated by a request from AVRIK during natural disaster or group accidents (Einarsdottir, 2001). The role of the DMHT is also to define, organize and execute crisis help and education on behalf of the LSH in Fossvogur. In 2001 there were fifteen experts active in the DMHT and thirty four could be called on when needed. According to the LSH organization flowchart, it is the DMHT Project Manager's role to cooperate with the IRC (Blondal, 2000).

### 1.5 THE CONCEPT OF CRISIS HELP

The term 'crisis help' [*afallahjalp*] has been used by AVRIK and the health care system in Iceland. The concept 'crisis help' was originally suggested in Iceland by the psychiatrist Borghildur Einarsdottir and was generally accepted in 1995 when the tragic avalanches hit the Westfjords (AVRIK, 1995). According to a committee, which in 1995 was appointed by the Minister for Health and Social Security to make proposals on the organization of crisis help, the first part of the word 'crisis' [*afall*] has a broad meaning and is used for example for accidents and diseases. The latter part of the word 'help' [*hjalp*] also has a broad meaning and can be seen as direct or indirect help.

---

<sup>4</sup> A third study on perceived earthquake-induced effects and their relationship to recorded strong ground motion as well as structural and non- structural damage was conducted by Akason in 2003.

The committee suggested that the term ‘crisis help’ should be used as an overall concept for psychological first aid (PFA) [*sabræn skyndihjálp*] and psychological debriefing (PD) [*tilfinningaleg úrvinnsla*]. The IRC also uses the term ‘crisis help’ or the term ‘psychological support’ (PS) [*tilfinningalegur stuðningur*] as an overall concept for different areas like PFA, PD and education of various kinds (Jonasdóttir, 2001b). Crisis help is intended for all persons involved or affected by a disaster. It focuses on the well being of the individual as a whole and the aim is to prevent long term Post Traumatic Stress Disorder (PTSD) as defined in the DSM-IV diagnostic criteria of the American Psychiatric Association (1994).<sup>5</sup> PTSD is characterized by re-experiencing symptoms (e.g. intrusive recollections of the trauma): avoidance of reminders of the trauma, emotional numbing and hyper-arousal (exaggerated startling, sleep disturbances, etc.).

Psychological first aid (PFA) is the first stage of crisis help. It includes physical and mental care for those who have experienced a traumatic event and is usually provided on the scene. This includes providing shelter, refreshments and the emphasis is on warm, comforting support. Psychological debriefing (PD) includes systematically working with strong feelings and crisis experiences. For the victims, PD can be given on an individual basis or to families and/or other groups who have had similar experiences<sup>6</sup>.

Aftercare and debriefing should be provided by specialists (AVRIK, 1995). The concept psychological debriefing (also termed critical incident stress debriefing, CISD) is relatively new. It was described by Mitchell (1983:37) as “either an individual or group meeting between the rescue worker and the caring individual (facilitator) who is able to help the person talk about his feelings and reactions to the critical incident.” According to Dyregrov, PD was originally designed as a method for groups and emphasizes that PD should be provided by experts. He states that:

For group meetings to achieve their aims they should be instigated within a brief time after the traumatic event, those who lead the group must be trained and experienced in leading the debrief proceeds, the group must have experienced a common stressor, time must allow a thorough review of the different “phase,” and the meetings used to screen those who need extra help (Dyregrov, 1998:1).

However, it should be stressed that studies are not identical about the effectiveness of PD (e.g. Arendt, 2000). Furthermore it has been pointed out that “the vast majority of trauma survivors recover from initial posttrauma reactions without professional help” (McNally, Bryant, and Ehlers, 2003:45).

---

<sup>5</sup> According to Zakour, until the 1960s studies of disasters were dominated by sociologists, and psychology and psychiatry experts became actively involved in disaster research and collective stress situations in the 1980s. Zakour states that “Experimental psychologists, aware of the limitations in external validity of laboratory research on stress, began field research on collective stress in disaster settings. In 1980 Post Traumatic Stress Disorder (PTSD) was formally recognized as a clinical disorder by inclusion in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III). Before this time it was not believed that disasters could lead to long-term stress disorders” (Zakour, 1996:14). The concept of PTSD is under constant discussion and criticism (Bodvarsdóttir, 2001).

<sup>6</sup> According to McNally, Bryant and Ehlers (2003:45) “cognitive-behavioral treatments differ from crisis intervention (e.g. debriefing) ...[and]...several controlled trials suggest that certain cognitive behavioral therapy methods may reduce the incidence of PTSD.”

## 1.6 HISTORICAL OVERVIEW OF CRISIS HELP IN ICELAND

Organized crisis help in Iceland started in 1973 after a volcano eruption in Westmann Islands, which caused major damage and led to the evacuation of five thousand inhabitants from the island to the main land (Asmundsson and Oddsson, 2000). After the disaster, social and psychological assistance was organized for the inhabitants. A crisis center was established in Reykjavik where lawyers, psychiatrists and social workers provided counseling and support. The inhabitants used the services of the social workers and lawyers but were more reluctant to the psychiatric services and believed that they were capable of handling their own personal problems (op cit). There was interest among those who worked in the crisis center to conduct research on the effects of the crisis on the inhabitants, but the authorities in Westmann Islands were not interested in the offer, and no research was conducted (Karlsdottir and Asgeirsson, 1973; Asgeirsson in Asmundsson and Oddsson, 2000). In 1974, only one year later, the village of Neskaupsstadur was hit by avalanches and 12 people were killed. Besides the support from the local minister, no organized crisis help was offered (Asmundsson et al., 2000).<sup>7</sup>

In 1991–1992 the nurses at the psychiatric ward of the LSH held seminars on crisis help. In 1994 the first psychiatric nurse was hired at the LSH to provide crisis help (Palsdottir, 2000).

In the fall of 1994 the District Physician in Bolungarvik (a village on the west coast) along with a psychiatrist and a psychiatric nurse were in charge of giving a course in crisis help for medical doctors and nurses in the nearby village of Isafjordur. This was the first time that such a course among medical professions was held in Iceland (Bernhardsdottir, 2001).

For the first time in AVRIK history, crisis help was provided on a massive scale in connection with the avalanche in Sudavik in January 1995, where 14 people died. In interviews, the residents of Sudavik and those helping with the rescue operation clearly asserted that the crisis help had been very valuable for them. Their experiences and comments confirm the importance and value of such treatment for people affected by a crisis. However Bernhardsdottir (2001) stated in her report that AVRIK felt that a formal link with the psychiatric ward was missing.

After the avalanche in Sudavik in 1995, the Minister for Health and Social Security in Iceland established a committee that was to make proposals as to how to promote and augment stress relief and crisis help in Iceland. This committee had not yet completed its work when a second avalanche fell in Flateyri in October the same year, where twenty people died. It was evident that “...no changes had been implemented in the administrative organization of the crisis help plan. Thus, the Reykjavik medical team arrived in Flateyri without a clear description of their work tasks or their responsibilities” (Bernhardsdottir, 2001:45).

In February 1995, the executive board of the LSH agreed to establish a coordinating disaster mental health team with three members (Palsdottir, 2000). The team operated for the first time following the avalanches in Flateyri in 1995.

In May 1996 the committee, appointed by the Minister for Health and Social Security, delivered recommendations about comprehensive planning for crisis help in the health care

---

<sup>7</sup> Many residents in Neskaupsstadur did not have the opportunity for debriefing until 20 years later when the avalanches in the Sudavik and Flateyri took place. Then crisis help was offered in Neskaupsstadur (Asmundsson et al., 2000).

system and AVRIK's emergency measures. The first recommendation concerned placing crisis help under the jurisdiction of the Directorate of Health in Iceland during natural disasters and mass injuries. The second recommendation was to employ a Project Manager specially qualified in crisis therapy for supervising the teams. The third recommendation was that the Regional Doctor in the respective district should assist the Project Manager in planning on-site crisis therapy (Bernhardsdottir, 2001).

The committee also emphasized that it is important to avoid having more than one crisis team operating at the same place at the same time and suggested a division of labor between the Disaster Mental Health Team (DMHT) of the LSH and the IRC. In May 1996 the Minister for Health and Social Security wrote a letter to AVRIK where he stated that the proposals had been positively reviewed by the Ministry<sup>8</sup> (AVRIK, 1995). AVRIK criticized the suggestions and gave written comments on the committee's suggestions (op cit.). When the 2000 earthquakes hit, these proposals had not been implemented and no detailed plan existed on how crisis help should be provided. But according to the Director of AVRIK, it was nevertheless considered clear that it was the task and responsibility of the health care system under the Directorate of Health to administrate crisis help within the civil defense system (Thorvaldsdottir, 2001).

## *2. Chronology*

In this section the course of events are described step by step from the time the first earthquake hit on June 17, 2000 until July 19 when the Rangarvalla municipal authorities issued a newsletter stating that normal day-to-day activities had been resumed. There were two major earthquakes on June 17 and 21 in this series of earthquakes, but they are regarded as one crisis. Thus, the period from June 17 to July 9, when the state of emergency was cancelled, will be analyzed.

### **June 17, 2000**

15:40 Earthquake hits Rangarvalla municipality. Its magnitude is reported at 5.7 Mb and 6.6 Ms.

15:40 The cell phone and mobile network is temporarily disabled. Part of the network is out of order for a few minutes with the last transmitters coming back on line at 16:15.

15:42 The first aftershock is reported at 5.7 Mb. Following this first aftershock, many small aftershocks occur over a larger area.

15:50 The Director of AVRIK phones the emergency hotline to get a report on the number of injured people. At that time, no injuries are reported. The Director of AVRIK requests that the emergency hotline staff contact AVRIK's coordination center to see if any cases have been announced.

15:50 The Chief of Police in Rangarvalla county arrives at the RCCD emergency operation center. The center is opened and the RCCD members are contacted.

---

<sup>8</sup> In 1997 the Directorate of Health in Iceland appointed specialists to a working group on crisis help education. The group finished its report in 1999 (Starfshópur Landlæknis um fræðslu vardandi afallabjalp, 2000).

16:00 The person on-call at AVRİK in Reykjavik arrives at AVRİK's coordination center.

16:00 The air rescue team (FBSH) from Hella, the rescue team (Dagrenning) from Hvolsvellir, and members of ICE-SAR are dispatched and assigned tasks including: investigating the public's well being, assessing the damage of public buildings and structures, and going house-to-house providing assistance where needed. The police force and later the members of the local fire unit participate in the investigation and assessing the damage. (The earthquake causes a fire at the power station in Hvolsvellir. Once the fire is under control, the fire fighters help the rescue teams making assessments.)

16:03 The ICE-SAR Emergency Operation Center is dispatched. All district commanders in the southern part, west of Hofn (in Hornafjord), are told to collect information on the earthquake's range, to assess damage to houses and roads, and to assess the rescue team's responses. Although the 17th District Command (at Hella) is never formally activated, the ICE-SAR keeps in touch with the District Commander and continues to keep in touch with the second in command, situated at the Air Rescue Command Station in Hella. ICE-SAR also offers support and back-up assistance to the local teams, but the locals feel that they have a handle on the situation and do not need further assistance.

16:05 A phone call is made from AVRİK to the RCCD to ask whether they need any assistance. So far there have been no reports of any casualties or serious injuries, and everything seems to be under control. At the same time, VHF radio contact between AVRİK and the RCCD is checked and proved to be in order.

16:15 The public radio station, RUV, announces that something serious has happened in the village of Hella but has no further news to report.

16:18 RUV contacts RCCD and confirms that there is no news regarding casualties or serious injuries.

16:20 The Director of AVRİK arrives at the AVRİK's coordination center in Reykjavik.

16:40 The private radio station, Bylgjan, broadcasts direct reports about the earthquake.

16:45 The last member of the RCCD arrives at the RCCD emergency operation center. The committee continues to collect information on the public's well being in the Rangarvalla county area, which includes Hella and the surrounding rural areas.

16:15–17:00 RCCD tries to contact AVRİK without success.

16:50 Electricity has been restored in Hella.

17:00 RCCD contacts an employee at the Rangarvalla county storage facility and asks him to assess the service equipment and building structures.

It quickly becomes apparent to the RCCD that the majority of damage is in Hella and the neighboring area. There are no major casualties, only a few minor injuries. Reports start to filter in about major damage to homes and household items. Rescue teams go house-to-house in the western part of the district and in the neighboring village of Hvolsvellir. Organized information gathering includes phoning each house in the area.

17:10 The Building Commission's representative for the western part of Rangarvalla county (who lives in Kopavogur, outside of Reykjavik) is contacted by RCCD. He is requested to come to the site and assess the safety of the houses. A team is organized under him to make a preliminary assessment of the buildings in the area.

17:20 Carpenters and other skilled workers are contacted by RCCD to participate in an organized assessment of houses and other structures.



17:30 After a number of conversations with Hella residents, it is confirmed that many houses are totally damaged.

17:35–17:50 Information is collected by RCCD from various district council chairmen in the area counties. The RCCD also contacts representatives from the National Disaster Insurance Fund who plan to arrive the next day to calculate preliminary damage estimates. On the radio, the public is told to report property damage to the Rangarvalla police, and to keep damaged household items in place. The public is also warned about possible water contamination and asked to close all water valves. Rescue workers distribute empty cardboard boxes to the public.

18:00 In an interview with the Director of AVRIK on National Radio (RUV), she warns that there is an ongoing danger of aftershocks and urges people to read the safety instructions in the telephone book. AVRIK also distributes an information booklet on how to behave during earthquakes (called Jardskjalftakverid).

18:00 RCCD discusses with a local Red Cross representative the possibility of immediately opening a mass care center in Hvolsvellir. Many people are planning on sleeping outdoors and many houses are uninhabitable. It is decided that a mass care center with sleeping facilities will open at 21:00 at an elementary school in Hvolsvellir (a nearby village outside the main crisis area).

18:00–19:00 RCCD continues to make phone calls to rural residences in Rangarvalla county and to houses located in Hella to inquire about injuries and to assess the damage. Preliminary assessment findings are provided by the air rescue team in Hella.

18:55 By the request, RCCD sends a written assessment report to AVRIK.

19:00 The Building Commission's representative arrives in Hella with skilled workers in order to assess damages.

19:00–20:00 The ICE-SAR emergency operation centers are disbanded.

19:00–24:00 Rescue teams, AVRIK, and the media are contacted by RCCD and informed about the current situation.

Repairs to a large 50 m deep crack in the road in Holt are completed. Bridges on the south side of the island are closed.

19:30–22:30 A RCCD meeting is adjourned so that members can go on fact-finding missions by walking the streets of Hella and talking to the public. People are urged to make plans for the evening, since many will not go indoors, let alone sleep indoors, and are very scared. The need for a local mass care center becomes evident, as many residents refuse to leave Hella to go to the mass care center in Hvolsvollur. The Hella elementary school is deemed safe, and therefore it is decided to open a mass care center there as soon as possible.

The Head Physician (HP) visits the air rescue command center in Hella. The Mayor speaks to the county employees and goes from house to house with the parish minister (who independently decides to go to Hella at 19:30). A RCCD member has a meeting with the Building Commission representative.

21:00 A mass care center is opened in Hvolsvollur by the local Red Cross.

22:00 The RCCD meeting reconvenes. It is decided to open a mass care center in Hella, but sleeping arrangements will be offered in Hvolsvellir. It is decided to hold a town meeting on Sunday, June 18, in Hella. The National Disaster Insurance Fund representatives, scientists, building commissioners and other specialists are contacted about this meeting.

23:00 The local Red Cross opens a mass care center in the Hella elementary school.

23:00 The HP phones the IRC Headquarters and asks for crisis support from the PFA team. This is done in accordance with advice from the health care representative at the AVRİK coordination center in an earlier phone call from the HP.

23:30 The HP contacts the local parish minister and requests his services in dealing with trauma counseling. The minister and a nurse are on hand to give immediate emotional support and counseling at the Hella mass care center. The minister stays in the Hella mass care center until it closes at 03:00 in the morning on June 18.

### **June 18, 2000**

00:20 RCCD leaves the emergency operation center.

10:20 At the RCCD meeting, Hella air rescue team requests assistance from ICE-SAR in helping the homeowners deal with their damaged houses. The ICE-SAR sends 40 members from district 1 (Reykjavik).

15:00 RCCD holds a town meeting with the inhabitants of Rangarvalla county. Between 300 and 400 Rangarvalla residents attend the meeting. Speeches are given by the district administrators, a representative from the National Disaster Insurance Fund, representatives from AVRİK, experts in seismology and earthquake engineering, and the Prime Minister of Iceland, who pledges support from the government.

17:30 Representatives from RCCD, IRC and the local parish meet and discuss the need for crisis support. It is decided to distribute the IRC booklet, "When life gets difficult," to every home and to ask teenagers to distribute the booklet. It is also decided to hold an educational meeting for the day care staff and the staff of the "Activity School" (summer activities for 13–15 years old). The Chief of Police announces that further assistance from IRC is required. The Program Officer of the IRC PFA/PS team begins to provide psychological support to the residents.

18:05 The Director of AVRİK contacts IRC and the Deputy Directorate of Health, and discusses crisis support. RCCD confirms that the request for help also includes psychological support for traumatized individuals. The Director of AVRİK emphasizes that support should be coordinated so the Head Physician (HP) in Hella, the Directorate of Health and an IRC representative do this.

18:45 The Deputy Directorate of Health phones the Director of AVRİK and tells her that he has spoken to the HP in Hella. It is concluded that the IRC should organize crisis support and hold educational meetings. The Deputy Directorate of Health intends to inform the Directorate of Health representative at the AVRİK coordination center about this.

### **June 19, 2000**

About one hundred people attend an educational meeting on the effects of trauma held by RCCD in Hella for the inhabitants of Rangarvalla county. Among those attending are the HP, local parish ministers, Red Cross volunteers and IRC representatives.

AVRİK announces that another major earthquake could strike and urges the public to be prepared.

Specialists from the Iceland Red Cross Psychological Support Team (IRC PS team) start to provide PD.



## **June 20, 2000**

11:00 A RCCD meeting is held.

Assistance is requested from district 1 (Reykjavik) for clearing out the personal belongs from two badly damaged homes. This request is sent in writing to AVRIK, which forwards the request to ICE-SAR.

Three Ministers from the government visit the disaster area.

## **June 21, 2000**

00:52 A second big earthquake hits. The size is measured at 6.1 Mb and 6.6 Ms.

01:02: The Chief of Police arrives at the RCCD Emergency Operation Center and activates the other members.

01:28 AVRIK is contacted by RCCD. The police contact the rescue teams. The Mayor of the Rangarvalla municipality checks the situation in Hella where the mass care center is reopened. The police inform the public by using a bullhorn about the opening of the mass care center.

01:35–02:35 District administrators and district council chairmen in the area are contacted. Damage is considerable, but the damages in the Rangarvalla municipality are not comparable to the damages of the first earthquake. This time other areas are struck much harder.

03:12 RCCD gives AVRIK a detailed report.

03:35 RCCD announces that the RCCD Committee will leave the command center at 03:45, but will remain on alert.

03:40 In a telephone conversation, the air rescue command center in Hella is told by RCCD that they may quit its operations after the preliminary inspection is completed.

03:42 The police units are contacted by RCCD and are told that they are finished once they complete an inspection of the few remaining rural residences.

## **June 22, 2000**

11.05 A RCCD meeting held. The Chief of Police announces that he has requested assistance from rescue teams outside the county. It is agreed to ask the IRC to continue to give their support and crisis help.

13:00 MPs from the South Lowland meet with district administrators and district council chairmen in their constituencies, and discuss the civil defense and insurance policy.

The President of Iceland visits the disaster area.

AVRIK announces that a rumor in the foreign media about a pending destructive earthquake is unfounded.

## **June 23, 2000**

11:10 There is a RCCD meeting. There are discussions about the need for crisis help. It is decided that the activities of the mass care center will gradually diminish and the shelter will be closed on June 27.

**June 26, 2000**

There is a RCCD meeting. The IRC reception will be closed on June 27. After that the local health care center and the local ministers will provide services, but additional follow-up services will be organized in cooperation with LHS.

**June 27, 2000**

The Red Cross mass care center in Hella is shut down.

**June 29, 2000**

There is a RCCD meeting. The need for follow-up is discussed further.

**June 30, 2000**

Housing has been found for almost all individuals who had to leave their homes after the earthquakes.

**July 7, 2000**

A RCCD meeting is held, and they decided to cancel the state of emergency.

**July 19, 2000**

The Rangarvalla municipality announces in a local newsletter that:

Day to day life is returning to normal in the earthquake areas. Earthquake watches have decreased and a calm is settling in. Those who can, have returned to daily chores, and try not to let anxiety from the earthquakes have an effect on their daily lives. Obviously, it will take longer for those individuals who lost their homes (or had to leave during reconstruction) to be able to return back to normal. Everyone is willing to lend a hand and help lighten the trauma these individuals have faced (Rangarvalla Newsletter, 10 July 2000).

*3. Decision-Making Occasions*

<b>Decision-Making Occasions</b>	<b>Type of Decision Unit</b>
How to organize the first measures?	Group
Need for opening the mass care centers	Group
Need for back-up	Group

The principle decisions have been extracted and an attempt to recognize the key functionalities has been made, although it is difficult to discern the individual influences involved in the

process. In this section the main emphasis is on decision-making occasions concerning the psychological and social crisis help.

### 3.1 HOW TO ORGANIZE THE FIRST MEASURES?

Due to the magnitude of the earthquakes, the Civil Defense responded, for the most part, without a formal request. The AVRIK coordination center was activated during the emergency stage, in accordance to its operational plans and due to the seriousness of the situation. The person, who was on call at AVRIK on June 17, felt the earthquake in his home in Reykjavik and realized right away that there had been a major earthquake. His first task was to try to contact the Director of AVRIK, the Meteorological Office (IMO) and the National Coast Guard's operation center, which answers the AVRIK hotline on weekends but he could not get through to all of them. He decided to dispatch the AVRIK coordination center staff and arrived there himself 20 minutes after the earthquake. The Director of AVRIK was in the town of Hveragerdi (in the South Lowland) and arrived at the coordination center 40 minutes after the first earthquake (Thorvaldsdottir, 2001).

The Chief of Police in Rangarvalla county arrived at the RCCD emergency operation center within 10 minutes after the earthquake, and the local civil defense system was activated within half an hour. Only five members of the RCCD, out of seven, were in the country at the time. The Chief of the Fire Department, the Head Physician in Hella, Hella's Building Commission's representative and the Mayor of Rangarvalla municipality were all easily and quickly reached. The Mayor of Hvolsvellir and the Mayor of Holta and Landsveit were not contacted; both were abroad.

The Head Physician (HP) of the Hella Health Care Center, along with three or four hundred local residents, was at the local gymnasium that day celebrating Iceland's National Day when the first earthquake struck. His first reaction, like those of many others, was to get out and he describes "...first I checked out the beams in the ceiling to see if they will fall on us or not" (Kolbeinsson, 2001). Once he was able to get out of the building, another earthquake occurred. The HP checked to see if there were any injuries in the crowd, but there were none. He then assessed the damages to his home and there he received a message from RCCD to attend a meeting. His first task was to go to the Hella Health Care Center to check for structural damages and to decide if it was prepared to accept casualties. Once he had finished his assessment, he drove to Hvolsvellir to the RCCD meeting arriving there at 16:15 (op cit.).

At first, there was no information about the strength of the earthquake in Rangarvalla county nor was it apparent how extensive the damage was. It was also unclear at that moment if Hella was on the outside perimeter of the earthquake or in the center. The RCCD committee began to collect information and decided to dispatch workers (volunteers) to assess the situation. Slowly, information trickled in, the first reports indicating no fatalities. The HP was in constant contact with the physicians at the local health care center. A few people had sought medical attention for minor injuries (Kolbeinsson, 2001).

The first reactions were to assess the residents' well being and the condition of the roads. Six vehicles were dispatched: four police vehicles and two rescue vehicles belonging to the local rescue team. When asked, the Chief of Police stated that the RCCD had decided that additional help from other rescue teams was unnecessary in spite of the many offers they had received. The local fire department joined in assessing the situation after they had extin-

guished a fire at the power station instigated by the earthquake. According to the Chief of Police, it quickly became apparent that the damage was extensive, but that there were no casualties or major injuries (Gudrodarson, 2001).

Members of the RCCD took a recess after a couple of hours, and went out to Hella to make their own assessment. The HP pointed out that this was done partly because insufficient evidence had been obtained from the assessment teams, and therefore it was decided to personally assess the public's well being (Kolbeinsson, 2001). The Mayor of the Rangarvalla municipality described this process, "We went inside people's homes at their request. Some people could not force themselves to go inside and were relieved to have someone go inside with them" (Gunnlaugsson in Thorarinsdottir, 2001:248). The Mayor believed that it was helpful to assist people in going inside their homes to assess possible damages. Emphasis was placed on behalf of the local administration to have optimal contact with the residents and with those individuals who needed help taking care of things after the earthquake (op cit). Thus social support was strongly encouraged by the RCCD right from the beginning of the operation.

### 3.2 NEED FOR OPENING THE MASS CARE CENTERS

On June 17 at 21:00 a Red Cross mass care center was opened in Hvolsvellir, a village near Hella. The RCCD decided that the center was to be outside the disaster area in case another earthquake of a similar magnitude would hit the same area. The opening was announced on the radio, yet no one showed up requesting assistance or care. During the preliminary on-site inspection, it became apparent that people did not want to leave the Hella community and that a mass care center needed to be up and operating in Hella as soon as possible (Kolbeinsson, 2001). This presented a certain dilemma for the decision makers since they had to meet the needs of the inhabitants for care and at the same time consider their safety.

At 22:00 the RCCD decided to close down the mass care center in Hvolsvollur as no one had come there. A mass care center was set up in a local school in Hella, following an inspection of the building's safety. An announcement was broadcasted on the radio and at 23:00 the center was opened by the local Red Cross branch. The opening of the center and its operations were done in cooperation with RCCD, AVRÍK and the IRC Headquarter in Reykjavik (Halldorsdottir, 2002). The local Red Cross, the HP, the district administrator, a nurse and two local ministers were on hand to give immediate emotional support and counseling. This was the first step in trauma counseling and psychological "first-aid" was offered (Kolbeinsson, 2001). People immediately began to trickle in and there was a steady flow of people. When it became apparent that some individuals could not sleep in their homes because of damages, sleeping arrangements were made in Hvolsvollurr and many people choose to sleep outdoors in campers or in tents in fear of another earthquake. The mass care center at Hella was closed at 03:00 a.m.

The HP described the situation as follows:

When we heard from the residents, saw their houses torn apart, saw stairs pulled from walls and everything turned upside down in their homes with our own eyes, only then could we understand the great panic. The residents were in a state of shock seeing their homes destroyed. We didn't understand this during the first hours. This is when the first thoughts about offering trauma counseling emerged (Kolbeinsson, 2001).

The HP spoke with the representative of the Directorate General of Health at the AVRÍK Coordination Center and he proposed that the HP contact the Red Cross Coordination Center in Reykjavik for an assistance, which he did.

On June 18, a town meeting was held at Hella where the HP, the local ministers, specialists and representatives from the National Disaster Insurance Fund (NDIF) informed the people of the situation. The Prime Minister of Iceland also made an encouraging speech on behalf of the Government. In the opinion of the HP, some of the anxiety seemed to be relieved after the meeting (Kolbeinsson, 2001). It was estimated that around three to four hundred inhabitants attended the meeting (Rangarvalla County Civil Defense Committee, 2000).

At the end of the town meeting, another meeting was held with the HP, two local parish ministers and three IRC representatives (the Director of the National Department, the Program Officer of the PFA, and the Head of the local IRC branch in Rangarvalla county). At that meeting, crisis help was organized and a plan was made for the rest of the day and the following day. Immediately after the meetings, the Red Cross volunteers at the mass care center assisted in giving PFA to the inhabitants who visited the center. The Program Officer of the PFA and the local Parish Minister provided PFA/PS to the inhabitants, families and groups (Halldorsdottir, 2002). Various services were offered at the mass care center and emphasis was put on warm and comforting support, information sharing, refreshments, a special activity area and activities for the children. It became evident that the damage to homes and property was extensive and that people were panic-stricken and feared more earthquakes. Parents were concerned for their children's well being and the ambiguity got on people's nerves. Fear and restlessness was also evident in the children (Kolbeinsson, 2001).

On June 19, additional help from the IRC Psychological Support team came to Hella to give PD to the inhabitants. People were also assisted on the phone. Many people from Reykjavik were staying in their summer cottages in the area when the disaster occurred and needed help in returning to their homes in Reykjavik. In a phone call with the Chairman of the LSH steering committee, it was decided to direct those people to the LSH in Reykjavik for psychological support and the IRC PS team was to assist the permanent inhabitants of the disaster area (Halldorsdottir, 2002).

The RCCD kept the Red Cross mass care center in Hella open from June 17 until June 27, from early in the morning until late at night to support the traumatized inhabitants. Debriefings were organized in which IRC representatives, local ministers and the HP offered information and trauma support/counseling for individuals and groups (Jonasdottir, 2001b). Not only was emotional assistance given at the center but it was also a place for the district administration to reach out to residents (Kolbeinsson, 2001). The district administrators and NDIF officials were also offered interviews with the IRC representatives.

When the second earthquake struck on the night of June 20, the mass care center immediately filled up with people. It was obvious that people knew where to go for assistance (Kolbeinsson, 2001). Many individuals still slept outdoors in tents and campers, especially the youngest residents, for approximately two to three weeks more. Some residents had just decided that they felt brave enough to enter their houses and sleep inside when the second earthquake hit. So the shock was, therefore, even bigger and people needed more psychological and social crisis help after the second earthquake (Erlendsson, 2001). "About 100 formal sessions of care and guidance were given to 162 people, and several were conducted over the phone. Some 120 people took part in debriefings..." (Jonasdottir, 2001a:46). Formal psycho-



logical and social crisis help was concluded on June 27 and the center was closed. It was estimated that five hundred individuals had visited the center during the nine days it was open. Around sixty volunteers were involved in the center's operations providing information, support and coffee, and it proved to be an easy task to get people to assist at the center (Thorarinsdottir, 2001:234).

From June 19 until June 27 four educational meetings were held in Hella and other towns and rural areas. Emphasis was placed on counseling children and their parents on how to respond to the shock and trauma they were experiencing. Around 690 people attended the local educational meetings (Jonasdottir, 2001a). Debriefing and educational sessions were also held for the children in cooperation with the local parish minister (Jonasdottir, 2001a).

The IRC PS team and the local parish minister also held various meetings with different working groups. Meetings were held with the leaders of the Activity School (for teenagers), the staff at the swimming pool, the municipality, the local day care center and the local elderly home (Jonasdottir 2001b). Meetings were also held for the immigrants living in the area (mainly Chileans and Poles), in their own language, to inform and support them as it was considered especially important to be proactive in reaching out to minority groups, who may not seek help on their own.

In cooperation with the PFA Program Officer of the IRC, the RCCD decided how the psychological and social crisis help should gradually be tapered off. On June 23 it was announced that the services of the IRC team would be available until June 27, but after that the Hella Health Care Center and the local parish ministers would provide crisis help (Kolbeinsson, 2001). It was emphasized that follow-up services would be offered and that the local HP and the DMHT would cooperate on organizing these services.

When examining the decision-making process regarding the crisis help, it is striking that there were no prepared directives or manuals on how crisis help should be organized. Nevertheless, the RCCD, AVRİK and IRC provided quite extensive crisis help.

The literature on the psychosocial impact of disasters indicates that certain characteristics are likely to produce stress and negative mental health effects (e.g. Berrent et al., 1989; Bolin, 1988; Quarantelli, 1985; Warheit in Bolin 1993). "These characteristics include suddenness of disaster impact, scope of impact, rapidity of involvement of a population, intensity of impact, length of warning, threat of recurrence and exposure to the deaths of others" (Bolin, 1994:20). The research shows that earthquakes are particularly stressful to victims, since there are typically no warning signs or environmental indicators that allow pre-impact measures to be taken. Indeed "the suddenness of earthquakes is a factor implicated in psychosocial distress among victims" (Berren et al. in Bolin 1993:19). In addition to the suddenness and the damage of earthquakes, there is the threat of reoccurrence and "victims are often reminded that threat in the form of aftershocks, which can be both physically destructive and psychologically distressing" (Bolin, 1993:21). Thus the literature supports the importance of psychological and social crisis help in the aftermath of an earthquake.

### 3.3 NEED FOR BACK-UP

The Icelandic Association for Search and Rescue (ICE-SAR) was dispatched by AVRİK and they contacted all of the local teams, in order to obtain information about the earthquake, damages and the rescue operation. A few members of the air rescue team in Hella were able

to get to the team's command center, and they focused on assessment expeditions and making phone calls to residents (Sveinsson, 2000). The RCCD only asked for assistance from the local rescue teams.

The Chief of Police in Rangarvalla county said he did not feel that the operation was so big to warrant calling in back-up, and the local rescue teams had managed the task quite well. Later, back-up assistance had been requested to support and assist residents in moving their personal belongings out of their damaged homes (Gudrodarson, 2001). The local rescue operation council (district 17) was never formally dispatched, but the national coordination center of ICE-SAR stayed in contact with the Commander and the Second-in-Command located in Hella. The offer for back-up assistance was repeated, but not accepted. The ICE-SAR ceased operations between 19:00 and 20:00 on the day of the first big earthquake on June 17 (Sveinsson, 2000:16).<sup>9</sup>

On June 18 the local air rescue team in Hella requested assistance from the ICE-SAR in helping the residents with their damaged homes. The ICE-SAR sent four teams, consisting of ten members each, from district 1 (Reykjavik and the neighboring area). On Tuesday, June 20, further assistance was requested; assistance was needed to help residents move their belongings out of the damaged houses. During the following two days, representatives from the ICE-SAR office came and helped the Hella air rescue team in dealing with the overwhelming number of residents' requests for assistance (op cit).<sup>10</sup>

## 4. Analysis

### 4.1 DECISION UNITS

Most decisions during the aftermath of the earthquakes were made by groups or in cooperation between groups. According to Stern (1999) this is common in crisis situations for many of the most important decisions are made in or shaped by small group deliberation. In this part of the analysis, the decision-making process of each decision making unit is addressed.

#### 4.1.1 *The Civil Defense Authorities*

As the national coordinator, AVRİK took decisions in the aftermath of the earthquakes. However it was the local CDC in Rangarvalla county (RCCD) that was the main decision maker, and AVRİK's role as coordinator was therefore limited (Thorvaldsdottir, 2001). This also applied to the decisions that were made regarding the management of the crisis help; the RCCD was the primary decision maker, but AVRİK's coordination center was consulted since assistance from outside the area was required.

When reflecting upon the role of the RCCD as an effective decision-making unit, it is necessary to consider the fact that the individual CCD members play many roles when responding to a disaster. The CDC members are experts and officials who also play important roles concerning community safety and security.

---

<sup>9</sup> See also section 4.4.2.

<sup>10</sup> After the second earthquake, more assistance was provided by back-up rescue teams, but mainly in Arnes county.



In the case of the RCCD, the Mayor of the Rangarvalla municipality had a certain role in the community, which proved to be crucial both in the phase immediately after the earthquake as well as in the recovery phase. The same applies for the Head Physician (HP) who obviously had a big role as such. When asked if this could create a problem in a disaster with many casualties or badly injured people, he said it would (Kolbeinsson, 2001). The commander of the fire brigade could be faced with serious problems if a fire occurred at the same time he was called in for a CDC meeting. And in fact, this applies to all CCD members; they all play significant roles in the emergency units which are vital during disasters. Thus, the question arises, if it is wise to place these important actors on the local CDC committees. The idea is obviously to get experts with the most relevant knowledge of the systems and who also know the community. But the question also has to be posed, what is more important for these experts: to be active in the field or to use their knowledge in the coordinating emergency centers?

In this particular case, these double roles that the RCCD members have did not seem to create a role conflict, since there were no big fires or many casualties. But as the HP acknowledged, it would have been difficult to attend the RCCD meeting if there would have been many injuries. Due to the fact that the civil defense system emphasizes the importance of local decision making and the coordinating role of the AVRIK's coordination center, it is difficult to point out how such a dilemma could be solved. Nevertheless, it should be emphasized that the members of the local CDCs are put into a tough position when they must prioritize their obligations when they are needed in many places at the same time during a crisis.

#### *4.1.2 Local Administration*

The local administration<sup>11</sup> played a vital role in all the phases of the disaster as a decision-making unit and took over the crisis management from the RCCD on July 7. From that day the local administration concentrated on the recovery of individuals and the community. The Mayor of the Rangarvalla municipality said, "The earthquakes are not over until everyone has received a solution to their problem and as long as damaged property is still visible" (Gunnlaugsson, 2001). In his opinion the residents were motivated to work together and this prevented the community from developing an image of itself as a pitiful disaster area. The Chief of Police's opinion of the community recovery process was that the disaster did not have a long-term influence and that the community experienced a strong recovery (Gudrodarson, 2001).

However, the division of labor between the local administration and the civil defense during the crisis was not clearly defined in the civil defense laws nor were there clear traditions on how the tasks should be divided. After the earthquake, some of the local administrators expressed their dissatisfaction regarding the communication and the role of RCCD. So, the committee held a special meeting with the local administrators, where the division of labor was analyzed and discussed (Rangarvalla County Civil Defense Committee, 2000).

---

<sup>11</sup> Unfortunately this research was limited to a small area and therefore it is not possible to refer to all of the different experiences. Such analysis would provide important knowledge and additional lessons for the future.

### *4.1.3 The Government*

The Government did not act as the direct decision making unit but it responded to the disaster in various ways. On June 18, the day after the first earthquake, the Prime Minister of Iceland and his wife attended a meeting in Hella with the residents of the area. Representatives from the Icelandic Metrological Office (IMO), the AVRIK and the National Disaster Insurance Fund (NDIF), among others, also attended this meeting. The Mayor of the Rangarvalla municipality stated that it made a big impact that the government authorities had quickly responded to the situation.

Government representatives immediately responded on June 18. The Prime Minister attended a town meeting in Hella. It was an important occurrence and the residents greatly appreciated that the government executive attended, showed empathy and pledged the Government's support. The people felt that the Government was going to stand behind the operations that needed to be performed (Gunnlaugsson in Thorarinsdottir, 2001:250).

By analyzing newspaper articles, it seems that the Government was successful in meeting the need for support immediately following the earthquake. The results of Bernhardsdottir's study (2001) show that similar government support was also important after the avalanches in 1995. Other Ministers also visited the disaster area, and the Members of Parliament from the area showed their support in various ways; for example, informally visiting the mass care center.

The Mayor of the Rangarvalla municipality felt that the Government had supported the counties with monetary funds as much as possible and pointed out that the Government had issued grants to those companies and farmers that had not been covered by insurance policies. In his opinion, support from the area Parliament Members was of great importance for the communities (Gunnlaugsson in Thorarinsdottir, 2001:253).

However, judging from the interviews in the media with individuals from the disaster area, there was also criticism towards the Government's financial support. In addition, some residents expressed their dissatisfaction regarding preliminary housing and insurance (For example DV, 11 June 2001 and DV, 14 June 2001).

### *4.1.4 The National Disaster Insurance Fund*

The National Disaster Insurance Fund (NDIF)<sup>12</sup> played an important role after the earthquakes. Disaster insurance is obligatory for every household in the country (Bernhardsdottir, 2001). The decisions and evaluations of NDIF have direct implications for rebuilding and repairing houses. After the first earthquake, the NDIF immediately responded by activating its operations, and experts from the fund attended the meeting at Hella on June 18.

The role of NDIF as a key actor in the household recovery phase should not be underestimated. Bolin points out that household recovery, community reconstruction and individual psychosocial distress are linked aspects of the overall recovery process. He states, "Household

---

<sup>12</sup> AVRIK is similar to the American organization FEMA, tasked with disaster mitigation, preparedness, response, and recovery planning. The NDIF is, however, tasked only with insurance issues.

recovery, particularly the re-establishment of permanent housing, is a fundamental part of an individual's recovery from the emotional distress of the event" (Bolin, 1994:21).

Thus household recovery is an important part of the recovery phase, and the way the services of organizations like the NDIF are organized can have a great effect on an individual and the community. Raphael points out that the risks of increased trauma during the post-disaster period; for example, "...issues of litigation – who pays for, and who receives aid or compensation. Bureaucracy and anger combine to make this a potent source of post-disaster distress..." (Raphael, 1986:27).

#### 4.2 PREPAREDNESS AND PREVENTION IN THE COMMUNITY

According to Tierney (1989:15) policy makers and researchers tend to agree on a convention that divides the disaster problem and its management into four phases: (1)<sup>13</sup> mitigation or preventative activities to reduce the likelihood of a disaster occurring or to reduce the magnitude of the impact a disaster causes (2) Preparedness (preparation): including such activities as planning, public education, and response training that is designed to increase the capacity of social units' responses in the event of an emergency (3) the performance of disaster-related tasks such as: evacuation, search and rescue, care for the injured, and the provision of emergency assistance, and (4) recovery or long-term efforts to rebuild the disaster stricken community and its infrastructures. Even though the main emphasis of this study is on the response effort immediately following the earthquakes, it is equally as important to discuss the extent to which the community was prepared in handling earthquakes.

It has long been known that a major earthquake would occur at any time in the South Lowland. Fifteen years ago, geologist Einarsson predicted an 80% chance that a major earthquake would occur across the south side of the island within the next 25 years (Stefansson et al., 2000). In light of this, Icelanders have been diligent in building structures to withstand major earthquakes (Sigbjornsson et al., 1998).

The Chief of Police in Rangarvalla county pointed out that after the earthquakes, the only houses that had been constructed below building standards were damaged. As far as the community's preparedness goes, his opinion is that the community was well prepared and that the civil defense had worked according to plan. As far as individual community members are concerned, he believes their preparedness varied greatly. In spite of the local authorities' thorough attempts to educate the public in the preceding years, it was apparent that not everyone was equally prepared for the earthquakes. And he said:

It is normal for people to procrastinate in preparing their homes for an earthquake. Naturally, it was a mere coincidence that there weren't man casualties or worse. So, in spite of diligent public instructions in recent years on securing this or that, including sending a special team to Hella to instruct the individuals, there was still a big difference in how it was applied. Procrastination is the Icelandic way and it was only luck that it didn't end up worse. But many inhabitants did as they were instructed to do and received support from the county, and many buildings had been assessed, for instance public buildings such as schools and the like (Gudrodarson, 2001).

---

<sup>13</sup> Thorvaldsdottir (2001) suggests that a new first phase should be added: risk analysis

Tierney (1989) points out that the general public accepts the need for disaster planning and believes hazard management is an appropriate role for the Government. Even though it is approved in principle, it is not viewed as a high priority.

Even when community residents are aware of natural or technological hazards, this awareness does not necessarily translate into preparedness activity. For example, research on household preparedness for earthquakes in Southern California, an area where earthquake awareness is high, indicated that the overwhelming majority of residents had done relatively little to prepare for earthquakes. Less than 10% of those surveyed had engaged in activities such as storing food and water, rearranging kitchen cabinets to prevent spills and breakage, or getting together with neighbors to plan what to do if an earthquake should occur. Only about 13% of the homeowners in the sample had purchased earthquake insurance (Turner et al. in Tierney, 1989:19).

Tierney concludes that major earthquakes are in the category of “low probability/high consequence” events and therefore it is hard to motivate people to take protective measures for these hazards.

A good example of the results of extensive preparedness can be seen in Hella. At the day care center in Hella, special arrangements had been made to ensure the place was as safe as possible. When opening on Monday morning after the first earthquake, the teachers observed that only some minor damage had taken place and in their opinion this had a positive effect on the recovery of the children since the day care center was a “safe place” in their minds (Sveinsdottir, 2001; Isleifsdottir, 2001). Another example from Samverk (a glass factory in Hella) clearly demonstrated the importance of preparedness. One employee was working in the factory when tons of glass fell during the June 17th earthquake. He explained,

Last winter, we discussed what we should do if we were inside the factory when a major earthquake happened. It was unanimously agreed that the glass-cutting table was most likely the safest place. We didn't think it was logical to try and leave the factory, since glass would be falling everywhere, just like it did the other day (Thorarinsdottir, 2001:222).

The glass-cutting table, weighing approximately two tons, moved three meters while the employee stood up on it. In his opinion, he would not have survived if he had tried to leave the factory area and he believes that basic plans should be made on how to react. “You are quicker to assess a situation and lose less time making decisions when you have no time to lose” (op cit.). The RCCD members felt that people had learned from the first earthquake so there was less damage when the second one hit.

The question is how further instructions and education will be handled and how to keep individuals alert, since experts do not agree on when the next earthquake will occur, although they do agree that more earthquakes can be expected. This is also a question for the civil defense authorities in other earthquake areas in the country (e.g. in northern Iceland) where big earthquakes are predicted. When the Chief of Police in Rangarvalla county was interviewed in July 2001 and asked if the residents still spoke about earthquakes, he answered no and added: “It has always been that way with natural disasters here in Iceland, that people don't discuss them much (Gudrodarson, 2001). He also claimed that the inhabitants have pushed away the notion of another earthquake and are not afraid. At the same time, the CP himself

claims that he would not be surprised if the next earthquake would be at least 7.5 on the Richter scale and people should be prepared for that (op cit).

As strange as this might seem, the Rangarvalla county residents are not alone when it comes to this kind of attitude. Raphael explains how it is impossible for people to account for every possibility disaster in everyday life. He states that in order to exist in a potentially dangerous world, people must manage their fear in order to be able to carry out necessary functions.

Yet most people not only set aside the general possibility of a disaster, but will act, even in circumstances of risk, as though a disaster could not possibly happen to them. They feel a sense of “personal invulnerability” – the belief that they could not be affected by catastrophe. At the simplest level this is seen in those who build and rebuild again and again on flood plains or on the site of a disastrous earthquake. Such behavior also reflects a general community consensus, a shared avoidance, and a joint magical belief in goodness and protection, as well as of course, sentimental attachment to a place (Raphael, 1986:30).

The importance of planning and preparedness for organizations is discussed further in section 4.5.3 on local authorities, but the literature emphasizes the benefits of such work. Furthermore, it emphasizes that organizations should cooperate since

Coordination of agencies and programs can lead to benefits at the micro level, such as individual and family preparedness through increased public education. Preparedness at both the micro and macro levels can improve individuals’ perceptions of control over events, which greatly decreases psychological distress (Zakour, 1996:18).

Thus, the preparedness stage directly influences the possible need for crisis help.

## 4.3 CRISIS COMMUNICATION AND MEDIA RELATIONS

### 4.3.1 *The Media*

The media plays an increasingly important role in contemporary crisis situations. The media helps create, shape and terminate a crisis. Since so much of a crisis has to do with perception, what creates media attention to a great extent determines what is considered a crisis. Effective crisis communication has become an essential part of crisis management (Newlove, Stern and Svedin, 2000:125).

Even though the media does not play a direct role in providing crisis help, its role in providing information and warnings is also of vital importance for the mental status of individuals.

There were some critical discussions on the role of the media during the earthquakes.

The mass media was both complemented and criticized on their reporting of the earthquakes. The public wants the most precise information in as short of time as possible, and yet they view the press as a menace to their important task. The news departments at the National Television and the National Radio (RUV) were also criticized. When the June 17th earthquake took place, the television was broadcasting a live football game. The evening news was delayed due to this live broadcast. People felt that it was only prudent to interrupt the broadcast and televise the news immediately. Channel Two (an independent station) on the other hand was quick on the scene and began broadcasting news from Selfoss (Thorarinsdottir, 2001:246).



Thus there was criticism directed to the National TV and National Radio. In an interview with the Director of AVRIK, she explained that she felt it was not the RUV staff who had failed, but the system itself. She pointed out that one of the first people the AVRIK staff on duty spoke to was a member of the RUV staff, so he was aware that the RUV was trying to immediately get information out about the situation. However, the RUV had at this time rules concerning who was allowed to stop a broadcast, and since it was a holiday it took time to contact the appropriate person with such authority (Thorvaldsdottir, 2001).

The IMO was also criticized since the first piece of information was incorrect; the IMO first said that the earthquake was 5.5 on the Richter scale instead of the actual 6.5. When asked, the sources stated that this made little difference in their jobs and that they would have responded similarly based on their own assessment rather than some abstract number (Kolbeinsson, 2001). On the other hand, some residents were upset with this miscommunication and the media presented this as a problem (e.g. Björnsson, 2000).

Hafstein, an Icelandic journalist, wrote an article in the Icelandic newspaper *Dagur* on June 21, 2000. He wrote:

When one listens to the voices of the people and tries to analyze the discourse, it becomes evident that people fear even bigger earthquakes. On the Channel 2 news last Monday, some important questions were asked, which we should pay attention to: What would have happened if people had been isolated and scared after the earthquake and not know anything about the situation?

If the earthquake would have been bigger or lasted a few seconds longer, the picture could have looked like this: hundred or thousands of people in shock, hurt or injured; an uncertain number of casualties; hot and cold water flooding buildings; no electricity in some areas; and possibly no phone connection. And what if the victims had no information except for their own assessment?

For a while one has wondered about the information processing in such circumstances. Is the system good enough? One of the most important things in such circumstances is good and reliable information. Information from the disaster area to the civil defense is important in order to make the right decisions and to inform the public. Citizens demand to have the right information. We do not want to live in some kind of false security. Should we assume that if there would be a big disaster, like an earthquake or volcano eruption, that we should not expect much help until some time has passed? It could very well happen that information is processed several hours after the fact or even longer? Should we prepare ourselves for anarchy in disaster areas since it would not be realistic to expect anything else? Now is a good time to discuss this thoroughly. Tomorrow it could be too late (Hafstein, 21 June 2000).

This reference highlights some of the critical questions asked by the media after the earthquake.

It could be argued that such critique is based on some kind of wishful thinking that assumes the civil defense system can provide much needed information at all times and rescue “everything.” It is a fact that no civil defense system could fulfill such demands. Furthermore, it is important to remember that the Icelandic civil defense system has no formally employed civil defense staff, aside from the five employees at the AVRIK headquarters. Thus, the structure must activate the members of the CDCs, AVRIK’s coordination center, and the various public and voluntary organizations. However, even though it can be stated that the media sometimes lacked knowledge of the civil defense system and how it operates, such coverage did have an impact and possibly lowered public trust in the system. That in turn could have affected the inhabitants’ mental well being and health. Thus the importance of the media is

not only its role as information broadcaster but also as the interpreter of a situation and creator of people's perceptions of a situation.

### *4.3.2 The Phone System*

Another communication issue that popped up during the crisis was the phone system. The stationary phone system functioned, but the earthquakes temporarily disrupted the cell phone system. The last transmitters were reestablished at 16:15 on June 17. According to Stephensen (the CEO and Public Relation Officer for the national phone company), the disruption occurred at the main cell phone branch in Reykjavik around the time of the earthquake and was most likely due to an overload of phone calls (Morgunbladid, 20 June, 2000). It is evident that the importance of refraining from phone use during disasters, unless a true emergency arises, failed to hit home with the public (Thorarinsdottir, 2001).

### *4.3.3 Disaster Tourism*

So-called "disaster tourism" where journalists and curious people crowd the operation site can in certain cases hinder emergency relief agencies from performing their tasks (Rosenthal and 't Hart, 1998). This phenomenon was clearly visible during the relief phase in Iceland.

Due to disturbances from curious visitors, the RCCD decided on June 23 to put up posts in the villages where travelers were asked to respect the need for peace and quiet at night since many of the residents were sleeping in tents outside their houses. The police later put up signs stating: "Limited traffic – Please show consideration, and respect the residents' need for rest between 23:00 – 07:00." The signs made a difference and traffic during the night in the village considerably decreased (Rangarvalla County Civil Defense Committee, 2000).

A store manager in Landvegarnot, named Holtum, said in an interview that there had not been a moment's peace following the earthquake, because of all of the strangers trespassing:

It was amazing to see how aggressive people were. We had to keep everything closed while trying to clean up right after the earthquake, but we couldn't get any peace from all of the strangers who wanted to 'just take a peek.' It was as if people didn't understand that this wasn't entertainment. We told them that it was closed, but they just asked surprised, 'couldn't we just look?' and even pushed their way in. We had the front doors open; I couldn't get myself to close them. If another earthquake would hit, I wanted to be able to get out. I had seen how the rooms had become completely blocked. We finally had to put up barriers across the front doors to protect the entrance, but people just pushed them aside and walked right in. There wasn't a moment's peace. None of them offered any help; they just thought it was exciting to look (Kristinsdottir in Thorarinsdottir, 2001:228-9).

According to Raphael this kind of behavior is people's way of seeing from a safe "distance" what they fear deep inside. He states that the death, destruction and mutilation associated with disasters are at the same time overwhelmingly horrifying yet fascinating.

It is as though people attempt to master what they fear and dread by observing and identifying with it, while at the same time renewing their own sense of life and power by their very survival in the face of death. There is a vicarious sense of mastery over death in this very process (Raphael 2000:25).



#### 4.4 ORGANIZATIONAL COOPERATION AND CONFLICTS

“Crises, by definition, turn up the heat on decision-making processes and consequently present challenges of political consensus-building and intra-organizational bargaining” (Newlove et al., 2000:121). The fact that the earthquakes in Iceland proved to be an ‘easy task’ created less pressure on the decision makers than otherwise would have been the case. According to our sources, there were no major conflicts between the actors in the field. Nevertheless when reviewing the organizational cooperation, it is also obvious that conflicts might have easily occurred, especially in a more demanding situation.

##### *4.4.1 Management of the Psychological and Social Crisis Help*

When the local Head Physician, on behalf of the RCCD, asked the Directorate of Health at AVRÍK’s coordination center where to get crisis help, he was told to contact the Icelandic Red Cross Headquarters in Reykjavík. Despite the lack of detailed planning and organization on how crisis help should be provided, it is regarded to be a part of the public health service (Thorvaldsdóttir, 2001). Thus, the fact that the HP was referred to the IRC and that the IRC PS team was called to give crisis help to the residents in the counties of Hella and Rangarvalla (and not the Disaster Mental Health Team), is surprising, especially considering the big role played by the DMHT after the avalanches in 1995.

According to the proposals presented by the Directorate of Health (DH) committee in 1995, it should have been the role of the DMHT to provide crisis help. Even though the proposals were never formally put into force, many of our respondents nevertheless mentioned the proposals and felt that the DMHT should have been dispatched.<sup>14</sup> The existing contract with the IRC applies only to mass relief, social assistance, and services that do not require specific expertise or long-term clinical training.

In an interview with a representative of the Directorate of Health (DH), she claims that it is the responsibility of the local health services to make a decision on how to manage crisis help. “If the HP, as an employee of the health care system, decides that the expertise of IRC is needed to support the DMTH, then that should be honored” (Aradóttir, 2001). On the evening of June 17 it was only thought necessary to provide psychological first aid (PFA) services at that time, as it was unclear if the inhabitants also needed psychological debriefing. At that moment, the HP was uncertain how much PS was needed, whether he should accept the IRC’s help and whether he was allowed to obligate the local government to pay for the IRC’s services. The HP stated that there was no manual for the district administrators to look up regulations in, and there was also a lack of clear procedures.

It is believed that this is why volunteers and officials constantly wonder whether they are doing enough or even if they were doing too much. Could they possibly have ended up doing something that was outside the system’s ordinary procedure, even if the system had originally sent them off in that direction? (Kolbeinsson, 2001).

<sup>14</sup> The DMHT was first activated after the second earthquake on June 20 in Arnes county, but the IRC team continued their work in Rangarvalla county.

After the IRC team had started to provide crisis help, some critical voices asked if this was not the defined role of the DMHT. But according to the respondents, it was considered best if the IRC team continued with their work (Aradottir, 2001; Kolbeinsson, 2001).

There are no psychological nor social services situated in or around Hella. In the first weeks after the earthquakes, the health care center in Hella emphasized discussing the possible symptoms of Post Traumatic Stress Disorder (PTSD) with the clients who attended the center. In August the HP started to prepare organized follow-up services for the residents. It was emphasized that such services would be provided in their home region (Kolbeinsson, 2001; Jonasdottir, 2001b). The HP discussed the matter with the leader of the DMHT and it was decided that the inhabitants should be offered full use of the services in Reykjavik but that follow-up services would also be offered in Hella (Kolbeinsson, 2001). Thus the HP decided to purchase the services from one of the psychologists on the IRC PS team, who had been a part of the emergency operation. These services were financed with money donated for this purpose to the health care center by a charity organization. The main purpose of the follow-up services was to assist those who were suffering from psychological distress as a means of preventing PTSD (Kolbeinsson, 2001). The follow-up services were available for three months and were concluded at the end of October since people stopped asking for the service (Thoroddsen, 2001).

The interviewees agreed that the problems created by the ambiguity regarding who should play what role needs to be fixed as soon as possible, because it is vital to have cooperation between the involved agents in crisis help. Furthermore the Program Officer of the IRC PFA/PS team and the psychologist, who provided the follow-up services in Hella, agreed that the hasty decision making increased the feeling of insecurity (Jonasdottir, 2001b; Thoroddsen, 2001).

After the earthquakes, discussions about organized crisis help even took place in the Icelandic Parliament and a proposition from the members of different political parties suggested that the local communities should appoint special committees whose role would be responsible for coordinating crisis help in their districts (Icelandic Parliament, 2001-2: Thingskjal 141).

#### 4.4.2 RCCD and ICE-SAR

The RCCD's decision to activate only two local rescue teams after the first earthquake was criticized in an article in the ICE-SAR's newsletter *Frettir*<sup>15</sup>. Sveinsson, the author of the article, wrote:

ICE-SAR was dispatched and all districts west of Hofn in Hornafjord were contacted and told to collect information on the extent of the earthquake, damage to houses and roads, and assess the rescue teams' responses. Few members of the Hella air rescue team arrived at the command center, but most of the members were unable to come because they were busy with their own families and their own property. Although the 17<sup>th</sup> District Command was never formally activated, the ICE-SAR kept in touch with the district's commander and continued to keep in touch with the second in command, situated at the air rescue team center in Hella. During their fre-

---

<sup>15</sup> The communication between the Civil Defense and ICE-SAR has not been addressed as such in this study and no interviews with ICE-SAR were conducted.

quent communications, the ICE-SAR continually offered support and back-up assistance from other rescue teams. The staff expressed their ability to handle the situation without further help. It should be mentioned that this is not a reflection of the local people but rather the responsibility of the ICE-SAR to send, without question, a team and to conduct an independent inspection of the situation. Between 19:00-20:00 ICE-SAR was disbanded (Sveinsson, 2000:16).

Sveinsson also criticized the use of local rescue workers after the earthquakes.

This is a classic example of a decision-making problem; according to the civil defense plans, the local CDCs are responsible for the crisis management and the decision-making processes in their area. But what happens if a disagreement arises between the local CDCs and AVRİK's coordination center? If such a disagreement cannot be solved then it is possible to consult the Minister of Justice who has the final say in the matter. The discussion regarding the decision on whether to call in reinforcements or to only use the local resources is a good example of the constraints that can appear under such conditions. Were the local officials the best qualified to make an assessment of the need? They had an overview and experience that others did not have, but on the other hand, they were also victims and many of them were preoccupied with the destruction that they and their families had personally faced. Sveinsson suggests that the ICE-SAR should have sent its own team to the site to inspect and independently assess the situation. He also questions if it is appropriate for AVRİK and ICE-SAR, as the coordinating organizations, to develop a procedure in which they automatically send representatives to the site. He points out that in these institutions people are constantly trained in responding to natural disasters and are experienced in such situations. This would require a change in legislation and increased authority for AVRİK in the districts (Sveinsson, 2000). It is necessary to mention that reinforcements were later requested from outside the district, and after the second quake reinforcements were immediately requested for helping the locals in assessing the damages.

However, as stated above, this issue is debatable and according to the Chief of Police in RCCD he believes that the decision to put the local teams in action was the right one. So obviously there are different views regarding this particular example (Gudrodarson, 2001).

#### 4.5 LESSONS LEARNED

Drawing lessons from these events is extremely important since this may very well be a "creeping crisis"; experts predict that momentum has been building up for the past 100 years and that the two earthquakes in 2000 are just the first signs of what is to come. According to the IMO experts, only a fourth of the stored momentum was released in these two earthquakes and they predict that the rest of the momentum will be released within the next few decades with earthquakes of even higher magnitude (7.0). Moreover, there has also been some activity in the north of Iceland suggesting earthquakes of similar magnitude within the next few decades (Stefansson et al., 2000).

#### *4.5.1 Organization and Outreach of the Psychological and Social Crisis Help*

As already addressed, an organizational plan for crisis help was non-existing at the time of the earthquakes. However AVRIK did established a committee with representatives from all partners in 2001 with the task of making such an organizational plan. Despite the lack of organizational plans during the earthquakes, there was widespread satisfaction with the services provided. Nevertheless, there are lessons to be learned from the experience.

Experiencing a natural disaster can result in acute psychological distress. It is likely that many of the people in southern Iceland showed systems of acute stress immediately after the earthquake. “The possibility of death is not an easy encounter and can change people’s lives. Several people who were severely affected by the earthquakes in the South Lowland thought that the last moment of their lives had come” (Bodvarsdottir, 2001:6). A house loss can also produce enormous stress about financial difficulties. Houses and farms were damaged. An inhabitant described the situation, “Everything was broken. It is like after a bomb attack” (Bodvarsdottir, 2001:5).

Studies of PTSD and mediating factors show that the range of PTSD among earthquake victims is between 32–60% in the adult population and 26–95% among children (Bodvarsdottir and Elklit, 2004). In an Icelandic study, PTSD (DSM-IV diagnostic criteria) among residents was noticeable after the avalanches hit two villages in northwest Island in 1995 (Asmundsson and Oddsson, 2000). Twelve to fourteen months after the avalanche hit the village of Sudavik, where fourteen people were killed, thirty-five percent of the inhabitants met the DSM-IV criteria, and three to four months after the avalanche hit the village Flateyri, where twenty people died, forty-eight percent of the inhabitants met the criteria.

People’s vulnerability for developing PTSD varies widely. Bolin (1998) states for example that people’s vulnerability to disasters is understood as a consequence of various kinds of social inequalities (e.g., political powerlessness and economic disadvantages) but also how they cope with disruptions and loss. Noel-Hoeksema and colleagues (in Segal, Williams and Teasdale, 2002) have for example revealed that people who reported before the 1989 Loma Prieta earthquake in California a tendency to respond to depression by ruminating had the highest depression scores following the earthquakes. Studies on gender-related and age-related differences have shown that women report more symptoms (Anderson and Manuel, 1994; Carr, Lewin, Webster, Hazell, Kenardy and Carter, 1995; Hitoshi, 1997) while others find no gender differences (Goenjian, Najarian, Pynoos, Steinberg, Manoukian, Tavosian and Fairbanks, 1994a; Noel-Hoeksema and Morrow, 1991). “These different findings can be due to different stressors, altered effects on basic assumptions, or biological or social structure” (Bodvarsdottir and Elklit, 2004:3). High post-traumatic symptoms have most often been reported in middle-aged and older people after an earthquake (Hitoshi, 1997; Carr et al., 1995; Lewin, Carr and Webster, 1998). Yet Kato, Asukai, Miyake, Minakawa and Nishiyama (1996) found that earthquake victims older than 60 years showed a significant decrease in 8 of 10 symptoms eight weeks after the disaster, which the younger group did not. Older people may experience more psychological symptoms after a disaster because they are more vulnerable regarding physical injuries and may have fewer social and economic resources than younger people. But as Elklit points out, older people often have more experience in coping with adverse events than younger people, which can reduce stress reaction (Elklit in Bodvarsdottir, 2001).



Bodvarsdottir and Elklit (2004) researched the psychological reaction in the areas hardest hit by the two earthquakes in the South Lowland. The survey was taken three months after the disaster.<sup>16</sup> Despite the fact that the response rate was quite low, the results nevertheless provide some indication of the PTSD frequency. The results showed that twenty-four percent of the respondents from the affected area had PTSD at that time but none in the control group. Furthermore, emotion-focused coping styles and levels of exposure were the variables most related to the development of PTSD. The affected group used less rational and avoidant coping skills. After the earthquake, the ability to express feelings and self-worth buffered the development of PTSD. The majority of the affected subjects (sixty-seven percent) were afraid of dying during the earthquake, sixty percent felt very helpless, fifty-four percent were very frightened when they noticed small tremors in the area and forty-four percent of the subjects were somewhat or very much afraid of another large earthquake hitting the area. In Bodvarsdottir and Elklit's study it was revealed that subject's level of acquired education most influenced the occurrence and degree of posttraumatic symptoms; subjects with only a few years of education displayed more symptoms.

The IRC carried out a telephone survey in Rangarvalla county two months after the earthquakes in order to evaluate the IRC operation in cooperation with Gallup International and Arnadottir (Jonasdottir, 2001a; Jonasdottir, 200b). The sample size was 582 inhabitants and 83.8 percent answered the questionnaires. The results showed that around twenty-eight percent of the respondents used the IRC services of which the majority received debriefings. Of all of the participants, the vast majority (88%) was positive to IRC's involvement in the disaster recovery work and generally satisfied with the assistance during and after the disaster. While ninety-seven percent said that the assistance they received did them well, only three percent said that the assistance had not made a difference for them. The survey also aimed at measuring the degree of possible psychological distress by asking questions about intrusive (troubled dreams, unwelcome thoughts and images) and avoidant thoughts (constricted ideas, denials of meanings and consequences of the event) from the Impact of Event Scale Questionnaire (Horowitz, Wilner and Alverez, 1979). The results showed that seventy-two percent of the participants had intrusive thoughts and twenty-nine percent had avoidant thoughts. In both cases the percentage of women was significantly higher than men.

Despite this insight into the inhabitants' feelings and measurements of their well being, the study lacked data on how the inhabitants had experienced the crisis management and the management of the psychological and social crisis help. Nevertheless, some lessons can be drawn from this. According to the IRC survey, the inhabitants expressed satisfaction with the Red Cross crisis help services. These results were also supported by various newspaper articles on the earthquakes. Even when the inhabitants complained about insurance issues, they expressed their satisfaction with the IRC services at the same time. Bodvarsdottir and Elklit's study (2004) reveals that despite this expressed satisfaction, twenty-one percent of the inhabitants were suffering from PTSD three months after the earthquakes. This result is also sup-

---

<sup>16</sup> Two probability samples of fifty-two adult subjects: residents in the affected area and a control group of twenty-nine adults from West Island (a part of the island that has no obvious natural hazards like earthquakes, volcanic eruptions or floods). The survey consisted of five scales: the Harvard Trauma Questionnaire (HTQ), the Trauma Symptom Checklist (TSC), the Coping Styles Questionnaire (CSQ), the World Assumption Scale (WAS), and the Crisis Support Scale (CSS).

ported by the survey of the inhabitants, conducted by the IRC, 3 months after the earthquakes; the majority of the respondents reported psychological distress (Jonasdottir, 2001a).

It is interesting that these results provide a different picture than the one presented by the follow-up services. From September 2000, follow-up services were provided at the health care center in Hella. The psychologist held weekly sessions at the health care center. "Although people were a little uneasy at first, their reluctance gradually diminished..." (Jonasdottir, 2001a:46). The services were advertised to the residents and were free of charge. A total of eighteen people, from ages eight to seventy-seven, used the services. According to the psychologist who provided the follow-up services, the main reasons for using this service were typical physical and psychological symptoms of PTSD. The most common physical symptoms were a lack of sleep, headaches, powerlessness, and physical numbness. The most common psychological symptoms were sound and noise sensibility (for example, when a door slammed shut, a car drove by, or when something shook/vibrated and thus reminded them of the earthquakes), difficulties in organizing daily life, and mental numbness. Some people found it difficult to be alone during the day, while others were afraid of sleeping alone. The disaster brought up old memories of difficult times, and some were unsatisfied while others devalued their fear. The people who had already started building up their homes again were more cheerful. The follow-up services were opened for three months and closed down at the end of October since people stopped asking for the service (Thoroddsen, 2001). It is obviously difficult to make a judgment about whether the aftermath services were sufficient or not, but according to Bodvarsdottir et al. (2001, 2004) and the ICR it seemed as if it would have been good to organize more outreaching services. Bolin suggests that outreach efforts should not stop simply because the more visible damage has been repaired. Victims may continue to experience elevated demand levels and can benefit from continuous disaster-relevant support services (Bolin, 1989; Bolin et al., 1998). Newburn (1993) suggests that proactive work has to be undertaken since some resistance and fear in asking for help exist.<sup>17</sup>

Newburn refers in his study on the aftermath of the Bradford fire where the Social Services made a policy decision to contact the next of kin of those who died instead of waiting for them to come forward and he states that this approach has found widespread acceptance in post-disaster work. Newburn also discusses the necessity of providing post-disaster services for a longer period and that the "Department of Health has recommended that social and psychological support services should be maintained for at least two years following a disaster, albeit in a changing and reducing form" (Newburn, 1993:10).<sup>18</sup>

Another point worth discussing is care for the care takers. When managing crisis help, no systematic services were offered to the care takers. However the IRC PS team gave PD to the local Red Cross volunteers and the IRC PS team got PD from outside experts (Jonasdottir, 2001b). ICE-SAR also organized crisis help for the members of their organization. But the members of the CDC committees, local administrators, and the majority of other care takers did not receive any organized crisis help. According to a report of the British Psychological Society, supervision and support have been confirmed to be a vital part of the process of disaster planning and response. The Society recommends that "support for those offering assist-

---

<sup>17</sup> "There is ample evidence from the literature that disaster victims are generally reluctant to seek counseling services for emotional problem related to their disaster experiences" (Lystad in Bolin 1986:74).

<sup>18</sup> A new study revealed that two and a half years after the events, 14.4% of the victims within 40 km of the June 17th fault are still suffering serious ongoing fear (Akason, 2003).



ance is an essential prerequisite for offering a service. Support structures including supervision must be in place” (British Psychological Society in Newburn, 1993). This point should be raised when reorganizing the structure for crisis help.

#### *4.5.2 Organization of the Civil Defense System*

Due to the narrow framework of the study, it is not the aim of this research to draw conclusions on the organization of the civil defense system. Nevertheless, the partners working in civil defense seem to feel there is a need for learning on two main points:

- Preparedness did pay off and it should be further improved.
- Communication has to be improved. More attention has to be directed to the role of local authorities.

The concluding words in a draft of the AVRÍK report about the civil defense operation during the June 2000 earthquakes are: “If one looks at the list of proposals for improvements and tries to say in one sentence what has to be done, it would be that communication and information processing must be improved (Bernhardsdottir and Thorvaldsdottir, 2002).

Despite the importance of collecting and processing information after a crisis, laws on civil defense do not address this subject or the evaluation procedures. AVRÍK has emphasized evaluation in its organization. AVRÍK made two internal evaluation reports after the earthquakes. AVRÍK has also worked on a detailed evaluation report, which systematically evaluates the roles of all partners involved in the aftermath of the earthquakes. Some respondents mentioned that it was difficult to draw any lessons until a complete evaluation had been conducted by AVRÍK. It is a known fact that if a long time passes between the crisis and the evaluation, it can have negative effects since people tend to forget as time goes by. It is important to point out again that there are only five employees at AVRÍK, so time and resources are limited. However, even though the final evaluation report was not published at this time (it had not been published when this research was conducted; it was published in December 2002) does not mean that AVRÍK did not draw lessons from the experience gained from the earthquakes.

In an interview with the Director of AVRÍK in 2001, she explained how lessons are constantly being learned and how changes are promoted within the civil defense system. Not only are communication and information processing being improved but a new coordinating center will also be constructed. The new coordinating center will be placed in the same building as the emergency hotline and Reykjavík’s Fire Brigade, which will strengthen cooperation between these partners.<sup>19</sup> The Director has also emphasized an increase in the staff and has specifically asked to hire a person specialized in health sciences. Furthermore, AVRÍK has worked on improvements in crisis management with other actors like the National Radio, and a committee for organizing crisis help has also been established (Thorvaldsdottir, 2001).

According to Birgisson (2000), there is a high level of community awareness and a strong sense of self-reliance among Icelanders, but he also feels that they are “strong in actually mak-

---

<sup>19</sup> In the summer of 2002, the Minister of Justice introduced ideas on the reorganization of the civil defense system: AVRÍK and its operation should be integrated into the national police, and the head of the national police should become the director of the civil defense system.

ing plans but weaker in implementing them.” Some of the respondents also referred to such national characteristics. The literature supports the fact that national cultures can affect the organization of civil defense. The influences of culture and system variables are discussed by Milieti who compares the response of Japanese and US organizational responses to earthquake predictions:

The Japanese organizations tended to view predictions as an “opportunity” to be acted on and were more likely to respond usefully, regardless of the risk. The U.S. organizations, on the other hand, tended to view the prediction as an imposition until convinced they were at risk. They seemed less likely to commit resources to preparation or mitigation activities, unless there were specific reasons to do so (Milieti in Raphael, 1986:37).

Milieti also states that it is important to gain a better understanding of the influences underlying socio-cultural variables regarding preparedness. This seems relevant for the case of Iceland. Important questions to ask are: why a nation threatened by natural disasters on a regular basis chose to staff the national civil defense headquarters with only five employees and why did it rely on volunteer rescue teams?

#### *4.5.3 The Role of the Local Government in Crisis Management and Psychological and Social Crisis Help*

A lesson to be drawn from the earthquakes and previous disasters is that the local administration often plays a very important role. Despite the suggested lack of research on community recovery, literature supports claims that communities go through a pattern of physical response to disaster (Raphael, 1986; Sundet and Mermelstein, 1996; Faupel and Kartez, 1996).

According to Eriksson (in Bernhardsdottir, 2001), people who experience disasters can lose their community consciousness and that is difficult to restore.<sup>20</sup> This has not been the case in the Rangarvalla municipality. All of the respondents agreed that the community proved to be solid and none of the residents chose to move away which is proof in itself. According to the civil defense laws, recovery is not listed as a task of the civil defense authorities.

The local administration took over the crisis management from the RCCD on July 7. Since then, the local administration has focused on the recovery of both individuals and the community. When the Mayor of the Rangarvalla municipality was asked what kind of information, material or support he had received when adding this role to his ordinary job tasks, he said that there were no manuals or educational material available to him. The mayors in six districts that were affected by the earthquakes formed a cooperation group in order to represent them when dealing with the government and the National Disaster Insurance Fund. In one of the group meetings, an experienced local administrator was invited to visit and share his experience of disaster mitigation (Gunnlaugsson, 2001). The Mayor of the Rangarvalla municipality emphasized that in the case of the Rangarvalla municipality the residents were encouraged to work together in the recovery phase and that kept the image of the community from deteriorating into a pitiful disaster area.

<sup>20</sup> According to Garaventa Myers, Erikson describes collective trauma as a “blow to the tissues of social life that damages the bonds linking people together and impairs the prevailing sense of community” (Erikson in Garaventa Myers 1989: 205).

The Chief of Police's assessment of the community's recovery was that the disaster did not have a long-term effect and that the community was recovering well. He also pointed out that none of the families faced with large property damages had moved away. According to him, this was in contrast to the situation after the avalanche disasters in 1974 and 1995; but the loss there was of a different nature, since those communities had to deal with many lost lives (Gudrodarson, 2001). However the local input in the recovery phase in the Rangarvalla municipality has probably played a big role in the positive outcome. Bolin points out that community solidarity and tapping local resources and knowledge to augmenting state and federal programs can enhance response effectiveness. "Encouraging significant local input in responding to an earthquake could also reduce social conflict over planning and reconstruction" (Bolin, 1994:97). This was surely the case in the Rangarvalla municipality where the local administration, the building inspector and other public servants played a key role in the aftermath and recovery phase.

Bearing in mind that nearly forty-two percent of the Icelandic population lives in a municipality with less than 20,000 inhabitants, it goes without saying that the resources are not sufficient for building up special services neither for prevention or crisis help (Yearbook of Nordic Statistics, 1996). Many of the small communities have limited health and social services (Eydal, 2001). According to Newburn (1993:187), "There is no local authority, or even group of authorities, that is likely to be sufficiently well resourced to take on the complete responsibility for the 'care' response to a disaster." By examining the literature, the emphasis on using and coordinating already existing resources seems to be the answer to this problem.

Newburn (1993) underlines how social services in the UK play a vital role in the aftermath of disasters by providing long-term response to major incidents. According to Newburn, social services can provide holistic services: both practical and emotional support on a long-term basis.<sup>21</sup> Faupel and Kartez state that it is important to involve social service agencies to promote access to populations that might have less access to emergency management agencies. They state (1996:134) "With regard to hazard education (specifically), the benefit of exchange relationships with social service agencies is especially relevant." The local authorities are also encouraged to seek cooperation with the voluntary sector and citizen groups that have particular skills which can be useful in recovery and reconstruction (Bolin, 1994; Newburn, 1993; Tierney, 1996). Many communities in Iceland have established social services departments staffed by professional (e.g. social workers<sup>22</sup>). Even though smaller municipalities often lack such resources, they often have psychologists in other fields who can be called upon when needed. Even though there are few hospitals outside of Reykjavik and the health care centers in smaller towns usually do not have specially trained professionals in crisis help, the local authorities can develop their own crisis help teams by utilizing the existing resources within their community.

Furthermore the literature emphasizes the importance of inter-agency relationships in the recovery phase. Faupel and Kartez (1996) highlight the role of planning departments:

<sup>21</sup> Newburn also describes the importance of telephone hotlines, especially in small rural communities which lack professionals in crisis help. According to Newburn, a telephone hotline's "primary functions (in common with all helplines) are listening, providing information, advice and, where appropriate and practical, counseling... The assumption is that the helpline may well be the first point of contact between those affected by a disaster and the helping agencies, and the offer of an anonymous listening ear may be less threatening and more acceptable than more formalized offers of help" (Newburn, 1993:13-14).

<sup>22</sup> The social work program at the University of Iceland is four years and includes a course in crisis help.

Planning departments are a significant source of poorly tapped local resources to support hazard management generally in at least two ways. First, a close examination of the various activities and functions of a comprehensive hazard management program reveals that local planning offices have a lead role in long-term mitigation policies and activities (including zoning authority for environmentally sensitive areas) and it is increasingly clear that these agencies will also have a lead role in long-term recovery processes. Second, planning agencies have routine expertise in areas that could be of great assistance to emergency program managers. For example, planners can provide technical assistance and data for emergency management information systems, such as GIS databases. Moreover planning departments have much expertise in public involvement and outreach activities (1996:133–134).

Unfortunately the planning agencies in Iceland have not institutionalized their lessons learned from the more recent disasters. The Building Commissioner and his co-workers at the planning department in the Rangarvalla municipality gained important experience and knowledge from the earthquakes in 2000, but this knowledge has not been documented or reported in any systematic way (Jonsson, 2001a).

In general our respondents in the Rangarvalla municipality agreed on the need for collecting experiences so that they could be put to future use. It is clear that other district administrations will also have to deal with the same or similar situations which the Rangarvalla municipality faced after the earthquakes in the summer of 2000. To some degree, the RCCD processed their experiences after the earthquakes by a request from AVRÍK, which evaluated the Civil Defense's crisis management. However, there is no special arena for evaluating the experiences of the local administration. The local administration plays many important roles and among them is their role in the recovery phase. Since there are many indications that the Rangarvalla municipal administration successfully dealt with the earthquake recovery in 2000, valuable lessons could be drawn and shared with others; it is important to formally document their procedures and work in order for others to learn from them.

Faupel and Kartez (1996) also recommend that before a disaster actually strikes, communities should use the experience of other communities in order to prepare and respond better. They describe how certain cities in the US have sent their government employees (from various departments) to disaster sites.

The result of this commitment on the part of these city governments is not only a better informed staff, but over time, these cities are raising their awareness of the threat of disaster and what they need to be doing to prepare for hazards in their communities. Communities can benefit from the disaster experience of other communities in this way (Faupel and Kartez, 1996:144).

But all this requires planning and according to Bolin, "Pre-disaster planning for recovery should be adopted as a part of long-range planning in all communities exposed to significant seismic hazard" (1994:99). When recovery results have been compared among communities, it becomes evident that the level of community preparedness is one of the key issues. "Emergency management is effective largely because of careful planning and rarely simply by accident" (see Sundet and Mermelstein, 1996). Does planning and preparedness pay off? Research supports that community preparedness does pay off (Mileti et al., 1975; Quaranelli in Tierney, 1996). Tierney states:

When organizations have a clear understanding of their disaster roles and when good working relationships are established into the predisaster period, the emergency response is less problematic (Tierney, 1996:28).

Even though some of the organizations involved in the recovery phase in Iceland after the earthquakes did not have a predetermined plan of their roles beforehand this did not result in problematic relationships. However, increased community preparedness would surely have made a difference.

#### *4.5.4 The Role of the Church – The Parish Ministers*

Conflicts can easily arise when participants in crises are not formerly requested to do so by the civil defense. It is apparent that during the crisis in question many residents responded quickly and began helping without even being asked. The parish ministers in the municipality had played a big role in providing crisis help in previous disasters, but were not formally integrated into the civil defense system. Here it should be added that ninety percent of the Icelandic population is registered as a member of the State Lutheran Church (Landshagir, 1999).

The local minister in Oddi was conducting a christening service at the church in Thykkvabaer, quite a distance away from the epicenter, but he felt the tremors just the same. When he came back to his home in Oddi, he realized that his place had been hit; things had moved around and other belongings had been broken. Once he saw the evening news he decided to go straight to Hella where he felt his services were needed. There he met the Mayor and they together walked from house to house. At 23:30, a while after the minister had started giving help to the inhabitants, he received a request from the HP at the health care center to come to the mass care center and help (Jonsson, 2001b). Thus this is a good example of an individual who started to assist without a request from the RCCD, but who was later requested to do so. However, the question comes up about whether the parish minister should have been approached sooner considering his position in the community? Of course, a minister's situation is somewhat unique since he anyway has obligations to support the community and to offer services. Nevertheless, it seems clear that the services of the parish ministers should be formally coordinated and organized in cooperation with the civil defense.

The local parish minister in Oddi had heard about a large rescue exercise in the area in 1994. No one contacted him at the time to participate, so he drove to the site on his own to check it out. There he found a room marked "The Parish Minister," but no one was inside. He interpreted this to mean that the minister should only be part of the stage backdrop, and not a participant in the drill (Jonsson, 2001b). The minister's role in Iceland has proven to be very important in regards to mental and psychological support, especially for devastated communities. This role has become such an important part of the services provided by ministers that the Society of Ministers in the Icelandic National Church has appointed a special committee whose role is to discuss the church's reactions in the event of group accidents.



#### *4.5.5 The National Disaster Insurance Fund*

The NDIF is an agent of vital importance in the recovery process. Thus it is important to include the NDIF when drawing lessons from the earthquake case.

The NDIF set up a command post in Hella immediately after the first earthquake. However it was not easy for the inhabitants to understand all the procedures that had to be taken regarding damaged property. A representative from ICE-SAR who attended the citizen meeting on June 18 gave the following account:

At the end of the meeting when people were told to call the Building Commission's representative to see if their house was habitable, to call the NDIF representative to assess damaged property and to contact the police or rescue teams for assistance; many looked confused. It was obvious that there was a lack of understanding of the whole picture (Sveinsson, 2000:16).

Obviously it was a very demanding job to evaluate all of the 2505 properties that were ruined or damaged as quickly as possible. For the inhabitants, the assessment of their homes was also an emotional matter. The Mayor of the Rangarvalla municipality stated that some residents had experienced two shocks: one in connection with the earthquakes and another regarding property loss, when they received what they considered to be a low estimation of their property (Gunnlaugsson, 2001).

On the one hand, the residents were angry and frustrated with the NDIF and on the other hand the Chief of Police claimed that all disputes were solved and that no cases were taken to court (Gudrodarson, 2001).

#### *4.5.6 The Importance of Research*

Icelanders have prepared for major earthquakes for decades by building their structures accordingly in order to withstand major earthquakes (Sigbjornsson et al., 1998). The earthquakes have verified that they have succeeded in doing just that; no bigger constructions were seriously damaged and most houses that had been badly damaged were built before 1970. This proves how important it is to conduct research on the effects of earthquakes in order to be able to learn how to respond and recover. In order to be able to learn the right lessons, further research has to be supported.

The Earthquake Engineering Research Center at the University of Iceland has conducted valuable research in the field. According to the respondents, the role of the Earthquake Engineering Research Center is highly valued by the residents in the area and is regarded as very important (e.g. Jonsson, 2001a). The director of the Earthquake Engineering Research Center writes, "We have to learn from this experience. We need to increase multi-disciplined research on the impact of earthquakes. I am referring to both economical and social research in addition to the traditional engineering research" (Sigbjornsson in Thorarinsdottir, 2001:162). The lack of social and psychological research is remarkable considering how frequent disasters in Iceland occur.

In addition, the work of the Department of Geophysics at the IMO was extremely valuable. Due to their hard work, it was possible to predict the earthquakes and furthermore the scientists could predict the second earthquake with a great deal of certainty. These warnings provided the residents with an opportunity to increase their preparedness.



## 5 Conclusion and Discussions

Considering the potential danger, it was a wonder that no one got seriously injured in the earthquakes in June 2000. There are many stories about how people had moved from places where they would have gotten seriously injured just minutes before the earthquake hit. One example is a three year old who turned off the TV and walked away; a few minutes later the earthquake hit and the TV fell exactly where the child had been standing.

Everybody agrees that the circumstances were as favorable as possible. The Chief of Police in Rangarvalla county used the word “nice” to describe the earthquake referring to the fact that no one was seriously hurt and that the weather was dry and unusually warm the following days, making it possible for people to stay outside in tents while temporary housing was arranged or houses made inhabitable again. Property damage was massive, but the inhabitants were thankful that no one got hurt. The very fact that there were no casualties or serious injuries created an opportunity to examine the civil defense system at work during a crisis that according to the literature would be labeled as an “easy task” thus providing lessons on how to improve the system.

The focal point of this research was to analyze how the psychological and social crisis help was managed during and after the earthquakes. When Bernhardsdottir made her analysis of the crisis help after the avalanches in 1995, she concluded that if Icelanders would be faced with a crisis on the same scale, disorganization would handicap the crisis help. Therefore it seemed of vital importance to investigate how crisis help was organized during the earthquakes in 2000 and whether lessons had been learned. The main finding in this study was that no systematic organizational plan of how to provide psychological and social crisis help had been in place when the earthquakes took place in summer 2000.

When the avalanches in the West Fjords struck in 1995, crisis help was provided by the Disaster Mental Health Team (DMHT) of the National University Hospital (LSH). According to the civil defense laws, it is the role of the health care system under the administration of Directorate of Health to provide health care, including crisis help. According to the committee appointed by the Minister of Health in spring 1995, the DMHT of the LSH should be in charge of crisis help during disasters. However, the committee’s proposals were never put into force. In 1999 the IRC established its own PS team emphasizing crisis help for children and young people.

When the HP from the RCCD contacted the AVRİK coordination center and asked whom he should contact in order to get crisis help for the inhabitants, he was referred to the IRC. As a result, the new PS team of the IRC played a vital role in providing crisis help after the earthquakes. According to the contract between the IRC and AVRİK, the IRC has the obligation to provide social support and psychological first aid. But during the earthquakes, the crisis help provided by the IRC was much more extensive than envisioned in this framework and the professional experts on the IRC team also provided PS. In addition follow-up services (which are the responsibility of the health care system) were provided by an IRC psychologist at the Hella Health Care Center on a request from the local HP.

However, criticism was generated because a volunteer organization (i.e., the IRC) provided crisis help when in fact it was the responsibility of the Icelandic health care system. Such services are regarded to be the role of the regular health care system because of legal issues concerning confidentiality and registration as well as the concern for providing proper after-care. Nevertheless, the experts on the IRC crisis team respected their professional and

ethical obligations and there were no signs that the issues mentioned above created strain or difficulties. On the contrary, all of the respondents who had received crisis help stated that cooperation between the local health care system, the local ministers and the IRC had been very good. It was also confirmed that the inhabitants were very pleased with the services they had received from the IRC.

According to the findings in this study, the lack of organizational plans regarding crisis help did not seriously handicap Rangarvalla municipality after the earthquakes in June 2000. However, the respondents felt that the lack of planning was negative and that the division of labor and services was unclear. The experts on crisis help from the public health sector, the Icelandic Red Cross and the Church managed to cooperate in a manner that insured crisis help to the inhabitants. However this was not self-evident and the lack of organizational plans could have easily resulted in conflicts between the actors. The need for solid operational plans regarding the division of labor in providing crisis help is of vital importance, especially when faced with more challenging crises (i.e., many injuries and/or casualties). If the earthquake consequences had been more extensive than those in June 2000, this need would have become more evident. It is necessary to evaluate what was successful in the management of the crisis help in order for others to learn from it.

After the earthquakes, the Director of AVRIK appointed a committee with the participating partners: AVRIK, the health care system, IRC and representatives from the national church (*Hopslysanevnd kirkejunnar*). A new organizational plan including a clear division of labor is currently being worked out. However as of the autumn of 2002, more than two years after the earthquakes hit, no concrete contracts regarding the division of labor in crisis help had been signed.

The definitions of what should be included in the concept of crisis help and who is able to provide such services have been much debated. Each time new services are developed, there follows a certain period of uncertainty and possible disagreement on the meaning of certain concepts. Among experts in the field, there is also an ongoing debate on the benefits and results of different kinds of crisis help. Regarding the effectiveness of PD, Dyregrov states that, "Several studies have failed to document any effect of the intervention, while other studies document a clear effect. Most studies, be that in favor of debriefing or not, have serious methodological flaws" (Dyregrov, 1998:1).

Regardless of the meaning people put into the concept of crisis help and the different results on the measurable value of different crisis support, it is clear that crisis help has gained wide support in Iceland. It has become an important part of civil defense during a crisis. The need for follow-up services after the earthquakes was confirmed in two studies on the residents' post-traumatic symptoms (Jonasdottir, 2001a; Bodvarsdottir, 2001; Bodvarsdottir and Elklit, 2004). Since follow-up services are an important part of the whole picture, it is important to include the organization of such services into the future structure of crisis help.

Even though an extensive analysis of the civil defense's crisis management was not conducted in this study, some concluding remarks on the issue are nevertheless in order. The system of the civil defense operated mainly according to the existing plan; this applies to AVRIK, RCCD and the other partners. However, there was some criticism in the media and within the system itself on some particular issues. These fruitful discussions have revealed the importance of learning and the exchange of knowledge in order to further improve the civil defense system. The most important learning opportunities are created by systematic evalua-

tion. Such an evaluation has been conducted by AVRIK (Bernhardsdottir and Thorvaldsdottir, 2002).

The fact that the AVRIK office only had a staff of five persons makes it somewhat difficult to criticize the fact that there were not enough resources put into the evaluation on the crisis management during the earthquakes. Having a strong central national civil defense organization in a country like Iceland is of vital importance in order to increase the security of the citizens. This is even more important considering the fact that the rescue teams and the IRC are volunteer establishments and that the individuals in the local CDCs are often placed there because of their positions in the community and not because they are civil defense specialists. Thus, it is necessary to have strong centralized units which have expert knowledge and realistic opportunities for supporting and educating the civil defense staff during disasters and crises. This applies to AVRIK as well as the IRC and ICE-SAR. In addition, it would be wise to have a crisis help expert on AVRIK's staff.

The study also clearly demonstrates the important role of the local municipalities. The role of the local municipalities in civil defense has, to a certain extent, been ignored. As mentioned before, the local administrators played important roles both during the actual crisis but most importantly in the aftermath of the crisis. In the Rangarvalla municipality, the recovery operation was mainly the task of the local administration for a year and a half. It is recognized that a disaster is more than a physical happening. Indeed, Quarantelli has stated that:

A disaster is not a physical happening, it is a social event. Thus, it is a misnomer to talk about natural disasters as if they could exist outside of the actions and decisions of human beings and societies. For instance, floods, tornadoes, volcanic eruptions, earthquakes, and other so called natural disaster agents have social consequences only as a result of the pre-, trans-, and post-impact activities of individuals and communities (Quarantelli in Searle, 1994:1).

The pre-, trans – and post-impact activities are first and foremost the task of the local community. There has been increased awareness of the important role that communities have in the preparedness phase. Goodyear maintains “Recognizing that a community-based approach is the best guarantee that improvement in disaster preparedness will be realized and sustained, the assisted population must participate in planning and preparation for disasters” (2000:26). According to the laws on civil defense, it is the role of each local CDC to increase preparedness among the residents. In Iceland there were previously many small municipalities, but the 1990s was a period of consolidation and the number of municipalities decreased on December 1, 2000. This has created more realistic possibilities for the municipalities to deal with different tasks, such as community preparedness and recovery work after a disaster.

In order for other municipalities to learn the lessons from the experiences gained during the summer of 2000, it is important that the municipalities affected by the earthquakes are supported in documenting their experiences. Furthermore it is important that more attention is paid to preparedness and that all local administrators are educated in managing a crisis in all phases: mitigation, preparedness, disaster related tasks, recovery and community rebuilding. It is not realistic to expect that the municipalities will have many civil defense employees, and therefore it is important for each municipality to build on its existing structures and knowledge from the local community. In regards to crisis help, the fact that during the past decade many municipalities have invested in social and educational professionals (like psy-

chologists and social workers) who play an important role in psychological and social crisis help and other related tasks. It is important to apply a holistic approach to crisis help, where all stages of a crisis are included as well as all actors (including representatives from the various municipalities and the National Disaster Insurance Fund) that have a significant role to play in crisis help – actors which are important both during a crisis and in the aftermath.

Last but not least, the need for increased research is evident. Even though research in seismology and earthquake engineering has been conducted for decades in Iceland, the research on the social and psychological effects of earthquakes has been limited. As Sigbjornsson points out, “We need to organize our environment so that the danger of earthquakes will be acceptable and that it is good to live here, despite the threat that the earth has” (Thorarinsdottir 2001:262).

### *Epilog*

The study was conducted in 2001-2002. Since then some major organizational changes have taken place. As already discussed in chapter 2 of this volume (Bernhardsdottir and Helgason), the organization of the Civil Defence (AVRIK) was changed in 2003. A committee was established to make suggestions on the organization of crisis help. It finished its work in 2002, and in January 2003 the Directorate of Health and the Director of AVRIK signed a contract regarding the organization of crisis help and the type of cooperation for such between the civil defence system and the health care system. According to the agreement, crisis help is the role of the health care system, but during a crisis, and in cases of group accidents, it is under the administration of the civil defence system.

Health care institutions are in charge of the organization in pre-defined areas. In addition the Directorate of Health in Iceland shall organize special teams of professionals in crisis help (Bjornsdottir, 2004). Furthermore, in March 2003, the Althingi voted on a parliamentary resolution suggesting that the Government should in cooperation with the local authorities organize crisis help that could be offered during serious accidents (Icelandic Parliament, 2002–2003: þskj. 1422)

### *References*

- Akason, Jon Bjorkur (2003) Perceived earthquake-induced effects and their relation to recorded strong ground motion as well as structural and non-structural damage An Unpublished MA-Thesis Nr. 2126 Faculty of Social Science, University of Iceland.
- American Psychiatric Association (1994) *Desk reference to the Diagnostic Criteria from DSM-IV<sup>TM</sup>*. Washington, DC: APA.
- Andersen, H.S.; T. Middelbo; and A.K. Christensen (1989) “Posttraumatic Stress Disorder.” *Ugeskrift for læger*. **151** (36), pp. 2242–2245.
- Anderson, K.M. and Manuel. G. (1994). Gender differences in reported stress responses to the Loma Prieta earthquakes. *Sex Roles*, **30**:725–733.
- Aradottir, Anna Bjorg (2001) Nurse at the Directorate of Health in Iceland. Personal interview.



- Arendt, Mikkel (2000) *Psykologisk debriefing – En kritisk analyse af metoden og dens effekt med rekommandation for fremtidig anvendelse Et forskningsprojekt under Dansk Røde Kors* Fredriksberg: Dansk Krise- og Katastrofepsykologisk Selskap.
- Asmundsson, G. and Oddsson, A. (2000). “Afallaröskun eftir snjoflodin á Vestfjörðum” [Post Traumatic Stress after the avalanches in the Westfjords]. *Salfræditimaritid [Journal of the Icelandic Psychological Society]*. 6: 9–26.
- AVRIK (1962) Log um almannavarnir nr. 94/1962 m.s.b. [Law on Civil Defense nr. 94/1962].
- AVRIK (1995) *Tillogur um heildarskipulag afallahjalpar [A proposition for an overall plan on crisis help]*. Reykjavik: AVRIK.
- AVRIK (1996) *Athugasemdir Almannaávarndar ríkisins við tillogum nefndar um heildarskipulag afallahjalp i heilbrigðisþjónustunni, menntun heilbrigðisstarfsmanna, þátttöku sjúkrahúsa og heilsugæslustöðva og tengsl við neyðaraælanir Almannaávarna ríkisins* [AVRIK’s comments on the Committee’s recommended overall plan for crisis help in the national health care system and employee education, hospitals and health care centers, and in relation to AVRIK’s Emergency Plan]. Reykjavik: AVRIK.
- Bernhardsdóttir, Asthildur Elva (2001) *Learning From Past Experiences- The 1995 Avalanches in Iceland*. Stockholm: The Swedish Agency for Civil Defense.
- Bernhardsdóttir, Asthildur Elva and Solveig Thorvaldsdóttir. (2002) *Suðurlandsskjálftar 2000* [Earthquakes in the Southland in 2000]. Reykjavik: The National Civil Defense (AVRIK).
- Birgisson, Arni (2000) “National Civil Defense of Iceland and the Role of Volunteers within CD” Paper presented at the 3<sup>rd</sup> *International Conference of Local Authorities Confronting Disaster and Emergencies* (LACDE). Reykjavik.
- Björnsdóttir, Bylgja Hrónn (2004) *Afallastjórnun innan íslensku stjórnsýslunnar* [Crisis management within public administration]. An unpublished BA thesis. Reykjavik: Faculty of Social Sciences, University of Iceland.
- Björnsson, B.J. (20 June 2000) “Brast RUV skyldu sinni?” [Did the public media neglect their duty?]. *Dagur – a newspaper*, 23.
- Björnsson, B.J. (21 June 2000) “Útvarpsráð á skjálftavakt.” [The Public Media Council on alert]. *Dagur – a newspaper*, 1.
- Blondal, M. (2000) *Drog að skipuriti afallahjalpar. Bradabirgdaskipulag afallahjalpar: útkall á afallasvæði* [Draft on a organizational plan for crisis help. Crisis help transient plan for affected areas]. Reykjavik: The National University Hospital, Fossvogur.
- Bodvarsdóttir, I. (2001) *The Angry Earth. Psychological Consequences of Earthquakes in Iceland*. M Psych research at the University of Aarhus, Denmark (Arskortnr. 9939349).
- Bodvarsdóttir, I. and A. Elklit (2004) Psychological Reactions in Icelandic Earthquake Survivors. *Journal of Scandinavian Psychology* 45 (1): 3–13.
- Bolin, R. (1989) “Natural Disasters.” In *Psychosocial Aspects of Disaster*, edited by R. Gist and B. Lubin, pp. 61–85. New York: Wiley John Wiley & Sons.
- Bolin, R. (1994) *Household and Community Recovery after Earthquakes*. Institute of Behavioral Science. Monograph no. 56. Boulder: University of Colorado.
- Bolin, Robert with Lois Stanford (1998). *The Northridge Earthquake- Vulnerability and Disaster*. London :Routledge.
- Carr, V.J.; T.J. Lewin; R.A. Webster; P.I. Hazell; J.A. Kendarly; and G.L. Carter (1995) Psychosocial sequelae of the 1989 Newcastle earthquake: I. Community disaster expe-

- riences and psychological morbidity 6 months of post-disaster. *Psychological Medicine*, 25: 539–555.
- Dagur* – newspaper (11 June 2001) “Tholinmaedin a throtum” [Running out of patience]. 6.
- Dagur* – newspaper (14 June 2001) “Forsætisráðherra hefði betur latid osagt ad allt yrði bætt- segir Heida Magnúsdóttir a Hellu sem var nybuin ad kaupa husid thegar thad eydilaðist” [The Prime Minister should have left some things unsaid when he promised that everything would be replaced, says HM who had recently bought her house before it was destroyed], 5.
- Dyregrov, A. (1998) *Psychological Debriefing- An Effective Method? Traumatology*, 4 (2): 1–9.
- Einarsdóttir, Borghildur (2001) Psychiatrist and Leader of the Disaster Mental Health Team (DMHT) of the National University Hospital (LSH). Personal interview.
- Erlendsson, Einar (2001) Head of the Red Cross branch in Rangarvalla county. Personal interview.
- Eydal, G.B. (1997) Born og jarðskjálftar [Children and Earthquakes]. *Uppeldi* 3 (10): 34–39.
- Eydal, Gudny Björk (2001) At utbilda och rekrytera social arbetare till sma lokala samhällen [Training and Recruiting Social Workers in Small Local Communities]. In *Socialt arbeid i storby og i sma lokalsamfund – ulike kulturer samme problem?* [Social Work in Large Villages and in Small Local Associations – Unique Cultures with the Same Problems?], edited by Hans Jørgen Wallin Weihe. Research report No.83, 2001. Lillehammer: Høgskolen i Lillehammer.
- Faupel, Charles E. and Jack Kartez (1996) “Inter-Agency Collaboration and Hazards Education in American Communities.” In *Research on Social Work and Disasters*, edited by Calvin L. Streeter and Susan A. Murty. New York: The Haworth Press.
- Garaventa Myers, D. (1989) “Mental Health and Disaster Preventive Approaches to Intervention.” In *Psychosocial Aspects of Disaster*, edited by G. Richard and B. Lubin, pp. 190–228. US and Canada: Wiley John Wiley & Sons.
- Goenjian, A.K.; L.M. Najarian; R.S. Pynoos; A.M. Steinberg; G. Manoukian; A. Tavosian; and L.A. Faribanks (1994a). Posttraumatic stress disorder in elderly and younger adults after the 1988 earthquakes in Armenia. *American Journal of Psychiatry*, 151 (6): 895–901.
- Goodyear, J. (2000) Disaster mitigation: Challenges to raise the capacity of at-risk populations in coping with natural, social and economic. *Australian Journal of Emergency Management*, 3 (15): 25–30.
- Gudrodarson, Fridjon (2001) Chief of Police in Rangarvalla county. Personal interview.
- Gunnlaugsson, Gudmundur Ingi (2001) Director of the Municipality of Hella. Personal interview.
- Hafstein, S.J. (21 June 2000) „Skjálfti í beinum” [Quivering bones]. *Dagur* – newspaper.
- Halldorsdóttir, Helga (2002) Director of the National Department of the Icelandic Red Cross. Personal interview.
- Hitoishi, J. (1997). Disaster stress of the 1995 Kobe earthquake. *Psychologica*, 40: 192–200.
- Horowitz, M.J.; N. Wilner; and W. Alvarez (1979) “Impact of Event Scale: A Measure of Subjective Stress.” *Psychosomatic Medicine*. 41, pp. 209–218.
- Icelandic Directorate of Health (2000) *Starfshöpur Landlækniseimbættisins um fræðslu vardandi afallahjálp. Yfirlit yfir starf starfshöpsins* [Report of the Directorate of Health’s working



- group on crisis help education – A summary of the group’s work.] Reykjavík: Icelandic Directorate of Health.
- Icelandic Parliament (2001–2002; 2002–2003) *Althingistidindi [Proceedings of Althingi- the Icelandic Parliament]* Reykjavík: Althingi Íslendinga.
- Icelandic Red Cross (2001) *Arsskýrsla Rauda kross Islands [Icelandic Red Cross – The 2000 Annual Report]*. Reykjavík: Icelandic Red Cross.
- Isleifsdóttir, Guðbjörg (2001) Nursery school teacher at a day care center in Hella. Personal interview.
- Johannesson, Tomas (2001) “Natturuhamfarir á Íslandi [Natural catastrophes in Iceland].” In *Orkuthing 2001. Orskumenning á Íslandi. Grunnur til stefnumotunar*, [Energy Council 2001. Energy culture in Iceland. A base for policy making], edited by María J. Gunnarsdóttir, pp. 238–246. Reykjavík: Samorka.
- Jonasdóttir, Elin (2001a) “*Icelandic Red Cross: Psychological first aid and psychological support.*” Psychological Support: Best Practices from Red Cross and Red Crescent Programs. Geneva: International Federation of Red Cross and Red Crescent Societies.
- Jonasdóttir, Elin (2001b) Program Officer of the IRC PFA/PS team. Personal interview.
- Jonsson, Sigbjörn (2001) The Building Commission’s representative for the western part of Rangarvalla county. Personal interview.
- Jonsson, Sigrúður (2001) Local minister in Oddi. Personal interview.
- Juliusdóttir, S. and S.H. Sigurdardóttir (1997) *Hvers vegna sjálfbodalidastorf? Um sjálfbodastarf, félagsmalastefnu og félagsradgjöf [Why volunteer? Volunteer work, social policy and social work]*. Reykjavík: Háskolautgáfan.
- Karlsdóttir, Sigrún and Pall Asgeirsson (1973). Psychiatric emergency clinic for refugees of volcanic eruptions. Lecture at the 17<sup>th</sup> Nordic Child-Psychiatric Congress in Reykjavík.
- Kato, H.; N. Asukai; Y. Miyake; K. Minakawa; and A. Nishiyama (1996). Post-traumatic symptoms among younger and elderly evacuees in the early stages following the 1995 Hanhin-Awaji earthquake in Japan. *Acta Psychiatrica Scandinavica*, **93**: 477–481.
- Kolbeinsson, Þórir (2001) HP at the Health Care Center in Hella. Personal interview.
- Landsþagir* (1999) [The country’s needs]. Reykjavík: Statistic Iceland.
- Lewin, T.J.; J.V. Carr; and R.A. Webster (1998) Recovery from post-earthquake psychological morbidity: Who suffers and who recovers. *Australian and New Zealand Journal of Psychiatry*, **32**: 15–20.
- McNally, R. J.; R.A. Bryant, and A. Ehlers (2003) Does early psychological intervention promote recovery from posttraumatic stress? In *Psychological Science in the Public Interest* **4**(2): pp.35–79
- Mitchell, J.T. (1983) “When disaster strikes...The Critical Incident Stress Debriefing.” *Journal of Emergency Medical Service*, **8**: 36–39.
- Morgunblaðið* – newspaper. (20 June 2000) “Tímabundin truflun varð í GSM-kerfi Land-símans” [Temporary problems with the mobile phone system]. 16.
- Newburn, T. (1993) *Disaster and After- Social Work in the Aftermath of Disaster* London: Jessica Kingsley Publishers Ltd.
- Newlove, L. M.; E. Stern; and L. Sveden (2000) *Auckland Unplugged*. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Noel-Hoeksema, S. and J. Morrow (1991) A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. *Journal of Personality and Social Psychology*, **6** (1): 115–121.

- Palsdottir, Katrin (January 2000) *Historical View of Crisis Help at the National University Hospital in Fossvogur, Reykjavik*.
- Proppe, O.J. (2000) "A Successful Case of Organizing Volunteers for Civil Protection, Search and Rescue." Paper presented at *The 3<sup>rd</sup> International Conference of Local Authorities Confronting Disaster and Emergencies (LACDE)*. Reykjavik.
- Rangarvalla County Civil Defense Committee (2000) Unpublished Protocols of the Civil Defense Committee in Rangarvalla County.
- Rangarvalla Municipality (19 June 2000) *Frettabref Rangarvallabrepps á Internetinu* [The newsletter of Rangarvalla Municipality on the Internet] Available at: <http://www.rang.is/raefni/fettaintern/nov00/ellefu-201100.htm> (Accessed on November 6, 2001).
- Raphael, B. (1986/2000) *When Disaster Strikes – A Handbook for the Caring Professions* London: Unwin Hayman Ltd.
- Rosenthal, U. and 't Hart, P. (Eds.) (1998) *Flood Response and Crisis Management in Western Europe: A Comparative Analysis*. Berlin: Springer Verlag.
- Searle, Wendy (1994) *Disaster and social science: A New Zealand bibliography – An annotated bibliography of New Zealand literature relevant to the social science study of disasters*. Wellington: Ministry of Civil Defence.
- Segal, Z.V.; J.M. Willimans; and J.D. Teasdale (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventive relapse*. New York: The Guilford Press.
- Sigbjornsson, R.; B. Bessason; Th.I. Sigfússon; Th. Sigfússon; and S. Thorvaldsdottir (1998) "Earthquake risk mitigation in South Iceland" *The 11<sup>th</sup> European Conference on Earthquake Engineering – 1998*. Ralkema, Rotterdam.
- Sigbjornsson, R.; J.Th. Snaebjornsson; S. Olafsson; B. Bessason; G.B. Baldvinsson; and O. Thorarinsson (2000). *Jarðskjalftar a Sudurlandi 17. og 21. júní* [Earthquakes in the Southland on June 17 and 21]. Selfoss: Jarðskjalftamidstod i Jarðskjalftaverkfræði Has-koli Islands [Earthquake Engineering Research Center of the University of Iceland].
- Stefansson, R.; G.B. Gudmundsson; and P. Halldorsson (2000) *Jarðskjalftarnir miklu a Sudurlandi 17. og 21. júní, 2000*. [The big earthquakes in the Southland on June 17 and 21, 2000]. Available at: [http://hraun.vedur.s/ja/skyrslur/isl\\_17og21jun\\_2000/index.html](http://hraun.vedur.s/ja/skyrslur/isl_17og21jun_2000/index.html)
- Stern E. (1997) "Crisis and Learning: A Conceptual Balance Sheet." *Journal of Contingencies and Crisis Management*. 5 (2) pp.70.
- Stern, E. (1999) *Crisis Decision-making: A Cognitive Institutional Approach*. PhD. Dissertation. Stockholm: University of Stockholm.
- Sundelius, Bengt; Eric Stern with Fredrik Bynander (1997) *Krishantering pa svenska – teori och praktik [Crisis Management the Swedish Way: In Theory and Practice]*. Stockholm: Nerenius & Santerus Forlag.
- Sundet, P. and J. Mermelstein (1996) "Predictors of Rural Community Survival After Natural Disasters. Implications for Social Work Practice." In *Research on Social Work and Disasters*, edited by C. L. Streeter and S. A. Murty , pp. 57–70. New York: The Haworth Press.
- Sveinsdottir, Kristin (2001) Head of a nursery school in Hella. Personal interview.
- Sveinsson, S. (2000) *Jarðskjalftarnir á Suðurlandi* [Earthquakes in the South Lowland]. *Fret-tir, Slysavarnarfelagid Landsbjorg*. 2:3. 15–18

- Tierney, K.J. (1989) "The Social and Community Contexts of Disaster". In *Psychosocial Aspects of Disaster*, edited by R. Gist and B. Lubin, pp. 11–39. New York: Wiley John Wiley & Sons.
- Tierney, K.J. (1996) "Social Aspects of the Northridge Earthquake" In *The Northridge California Earthquake of January 17, 1994*, edited by M. Woods and R. Seiple, pp. 255–262. Sacramento: California Department of Conservation, Division of Mines and Geology.
- Thorarinsdottir, T. (2001) Sudurlandsskjálftar 2000: Ahrif og afleiðingar [The Southland earthquakes of 2000: Impact and consequences]. *Godasteinn* 37 (1): 218–263.
- Thoroddsen, Johann (2001) Psychologist and a member of the ICR PFA/PS team. Personal interview.
- Thoroddsen, T. (1905) *Landskjálftar á Íslandi* [Earthquakes in Iceland.] Kaupmannahöfn: Hid íslenska bokmenntafélag [Copenhagen: The Icelandic Literature Society].
- Thorvaldsdottir, Solveig (2001) Director of AVRIK. Personal interview.
- Yearbook of Nordic Statistics* (1996/2000) Copenhagen: Nordic Council of Ministers and Nordic Statistical Secretariat.
- Zakour, Michael J. (1996) "Disaster research in social work." In *Research on Social Work and Disasters*, edited by Calvin L. Streeter and Susan A. Murty. New York: The Hatworth Press.



# Chapter 4

## The Fishmeal Crisis

*Baldur Thorhallsson and Elva Ellertsdottir*

### *1 Introduction*

On November 29, 2000, the Icelandic government received information about a proposal from the European Commission concerning a temporary ban on fishmeal in animal feed. Fishmeal for all animals (except for farmed fish, pets and fur-bearing animals) would be banned. The ban would take effect on January 1, 2001, and be in force for 6 months. The proposal was to be submitted the following day before the Standing Veterinary Committee (SVC) in the Commission along with other measures targeted to tackling the BSE crisis in the European Union (EU). The SVC had the authority to take the final decision in the matter by qualified majority voting.

This created a crisis situation in Iceland since in 2000 fishmeal and fish oil constituted 7.3% of the total export value of goods in Iceland (Statistics Iceland, 2003). About 57% of the export went to the EU market of which over eighty percent of it was used for other feed than for farmed fish, pets and fur-bearing animals. In addition, the proposal was likely to jeopardize the fishmeal export to Norway, which accounted for one third of Iceland's fishmeal export (Federation of Icelandic Fish-Processing Plants, 2001).<sup>1</sup> Many small villages along the Icelandic coast depend on the fishmeal industry, and eight of the twenty biggest fish factories in Iceland run fishmeal factories. Iceland had to react swiftly in order to defend its interests in the fishing industry and its economy.

According to scientific reports, fishmeal does not carry BSE (European Commission, 27-28 November 2000). The crucial question for Iceland was whether political pressure would prevail in the SVC and the Council of Agriculture, or whether scientific facts would override political arguments? This question was of utmost importance for Iceland since scientific arguments were Iceland's main weapon in its attempt to get the Commission to withdraw the proposal and to get member states to reject it.

Iceland is an associated member of the EU as a result of the European Economic Area Agreement (EEA Agreement). The interesting question in the crisis was how did the EEA Agreement affect the reaction of the Icelandic government to the crisis? Did the agreement secure Icelandic interests or did Iceland have to use other means to defend its interests within the EU? Would Iceland be able to establish a coalition within the EEA framework for rejecting the proposal?

This chapter examines six different important aspects of the fishmeal crisis. Firstly, it looks at the decision-making units to see at what level within the Icelandic administration the main decisions were taken regarding the course of action. Secondly, the involvement of experts in the decision-making process is examined. Thirdly, the value complexity facing the

<sup>1</sup> The remainder of fishmeal exports went to the United States and Canada, 8.5%, and 0.85% to other countries.

Icelandic decision-makers is analyzed. Fourthly, the role of information and communication during the crisis is considered. In addition, a number of questions are explored: Should the Commission have notified Iceland of its intentions to ban fishmeal in animal feed? Did Iceland use the formal EEA institutions? How were communications and the flow of information within the Icelandic administration? Did the media play any role in the crisis management? Fifthly, the issue of multilateralization is scrutinized; that is, to what extent Iceland was able to use the EEA Agreement to protect its interests. Finally, the study looks at the lessons learned from this crisis? The intention is to use this analysis to give a clearer picture of the crisis from the position of the Icelandic decision makers.

*Figure 1: Fishmeal and fish oil exports as percentage of total export value of goods from Iceland, 1980-2000 (National Economic Institute, 2001).*

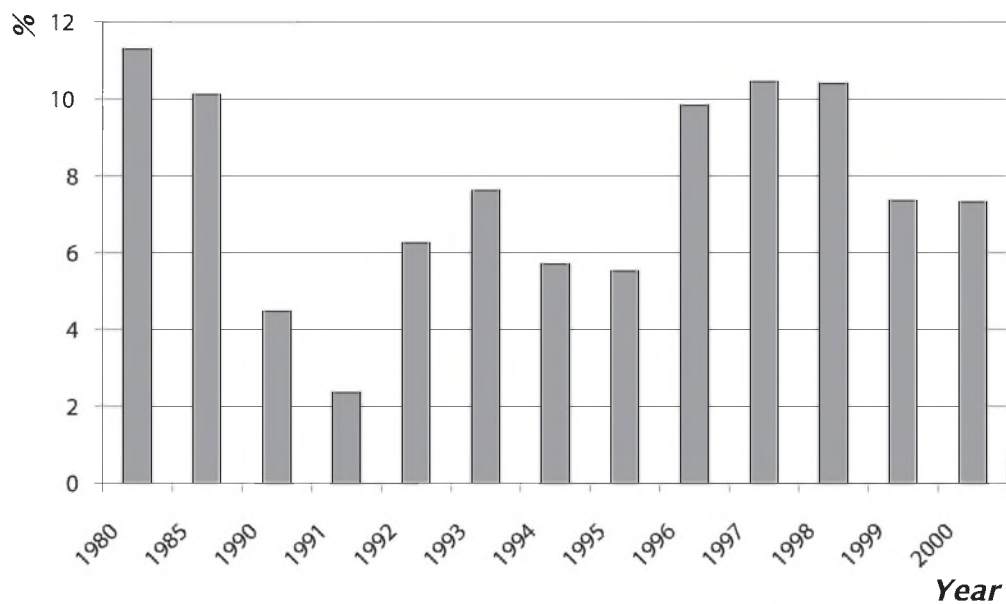
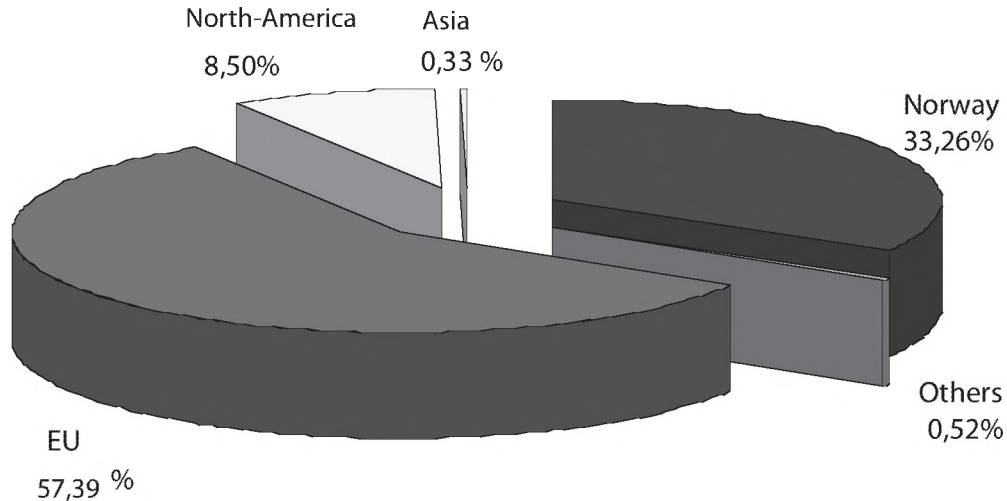




Figure 2: Percentage breakdown of fishmeal and fish oil export by countries in 2000 (Federation of Icelandic Fish-Processing Plants, 2001).



## 1.1 THE SITUATION DEFINED AS A CRISIS

The definition of a crisis in this study will be the one introduced by Sundelius, Stern, and Bynander. A national crisis occurs when the central players feel that: important values are on the line, limited time is available, and the circumstances are marked by a great deal of uncertainty (Sundelius et al., 1997).

### 1.1.1 Important values on the line

Small states tend to have common economic characteristics. They rely to a greater extent upon foreign markets for goods and services than large states because of their specialized production base (Griffiths and Pharo, 1995) and also their domestic markets are perceived as less important (Olafsson, 1998).

Iceland is clearly a small state with only 280,000 inhabitants and consequently a small domestic market. The Icelandic economy is heavily reliant on the export of marine products. Marine products constituted about sixty-three percent of exports of goods in 2000 (National Economic Institute, 25 July 2002) and thirty-nine percent of the foreign currency earnings (Valdimarsson, 2001). The fishing industry accounted for about ten percent of Gross Domestic Product (GDP) in 2000 but it has been estimated that the proportion of GDP generated by the fisheries sector and the occupations that support it could be as great as 35-40 percent (Snaevarr, 1993: 56). The EU is Iceland's biggest trading partner. The Commission's proposal to ban fishmeal in animal feed was considered a temporary measure, but there was always a risk that the proposal would be largely accepted and that the ban would be extended.

Such is the case concerning the fishmeal ban in ruminants (i.e., cattle, cheep and goats), which is still effective.

The fishmeal ban would have had multiple effects in Iceland. Many of the fishmeal plants are located in small villages along the coast and the inhabitants heavily depend on the fishmeal industry for their livelihood. Capelin fishing would also be seriously affected and services surrounding the industry would be badly hit. Furthermore, an excess of fishmeal could cause a drop in the price of fishmeal and fish oil internationally. It is also clear that the fishmeal ban would have had an indirect impact on markets outside the EU as they would also have to fulfill EU requirements in order to be allowed to import agricultural products to the EU.<sup>2</sup>

In the long run, a ban on fishmeal in animal feed could damage the image of fish products for human consumption and this would be particularly harmful for Iceland. Moreover, the ban could have a negative impact on the food industry in general (Icelandic Embassy in Brussels, October – December 2000).

### *1.1.2 Limited time available*

The Icelandic government had a very little time to respond to the crisis. The government only learned of the Commission's proposal a day before it was to be discussed in the Standing Veterinary Committee (SVC) on November 30. The SVC has the power to make final decisions for the EU member states regarding the Commission's proposals with a qualified majority. The proposal did not receive a qualified majority and thus automatically went to the Agricultural Council, which was supposed to meet on Monday, December 4. The Icelandic government only had three working days, plus the weekend, to present its case for the EU member states and the Commission before the Council would meet.

Furthermore, Iceland is not a member of the EU and does not have direct access to all the decision-making levels of the EU. This makes it more difficult and time-consuming to present Iceland's position to the member states and EU institutions. Also, the Icelandic administration is considerably smaller than the administrations of the EU member states. Thus, the question arises whether the small administration had the capacity to deal with the crisis concerning the limited time available.

### *1.1.3 The circumstances and a great deal of uncertainty*

There was a great deal of uncertainty about on which grounds the EU could make decisions. Would political pressure prevail in the SVC and the Council, or would scientific facts triumph?

The crisis was a test case for the EEA Agreement. Would Iceland be able to influence EU decision makers by using the EEA institutions or would Iceland have to use other means to protect its interests? Were Icelandic interests sufficiently secured in the existing framework of

---

<sup>2</sup> According to the EU Council decision on December 4, 2000, "Member States shall prohibit placing on the market, trading, importing from third countries, and exporting to third countries of processed animal proteins intended for feeding animals which are kept, fattened or bred for the production of food."

the EEA Agreement or would Iceland have to consider full participation in the EU in order to succeed?

## 1.2 METHOD

The methods used in CRiSMART's research program *Crisis Management- Europe* have been applied to this case study. According to the method, the first step is to empirically map out the course of crisis events in detail. The purpose of this is to create a more comprehensive picture by putting together many pieces of information from various sources.

Secondly, the crisis is divided up into a number of important decision-making occasions. The reconstruction of events serves as the basis for identifying the key decision makers and the key decision-making occasions (the so called 'what do we do now' situations).

Thirdly, these occasions are explored further and are used to construct different theoretical and explanatory perspectives regarding the decision-making process. Six of the ten existing themes presented by Sundelius, Stern and Bynander in *Crisis Management the Swedish Way: Practice and Theory* (1997) were used to facilitate this: decision-making units; experts in decision making; value conflicts; information and communication; multilateralization; and learning

## 1.3 SOURCES

This research is built on a wide variety of sources. The data and communications system (Lotus GoPro system) at the Ministry for Foreign Affairs in Iceland was particularly useful. The Lotus GoPro system enables the Ministry and its embassies to simultaneously access documents and correspondences from a database: e-mails, letters, internal reports, minutes and notes. Likewise, the Ministry provided access to the original notes sent from the Icelandic Embassy in Brussels to the Ministry and to the Minister for Foreign Affairs who used them to inform the Icelandic Parliament about the crisis. Also an internal report was written by the Icelandic Embassy in Brussels in which officials examined the crisis and listed a number of lessons learned. Furthermore, the Ministry for Foreign Affairs and the Ministry of Fisheries had a number of letters and reports from outside bodies, among those the Icelandic Feed, Seed and Fertilizer Inspectorate, the Icelandic Directorate of Fisheries, and the Veterinary Office. In effect, the Ministry for Foreign Affairs gave access to all the documents it had on the fishmeal case.

Documents from the Ministry of Fisheries in Iceland, the Icelandic Association of Fishmeal Manufacturers, the International Fishmeal & Oil Manufacturers' Association (IFO-MA), and Statistics Iceland were also used. A number of books, journal articles, academic reports, and internet sites contributed useful knowledge to the research. In addition, all news coverage in the main newspaper in Iceland (*Morgunbladid*) concerning the crisis was examined.

Furthermore, twelve interviews were conducted with: seven officials in the Icelandic national administration, two Icelandic Ministers, two persons in the fishmeal industry in Iceland, and an EU official. The interviews were conducted from February to September 2001. Eight of these interviews were in-depth interviews where a questionnaire was used as a base for the interviews. The four remaining interviews focused more on particular aspects of the

case and were used to clarify and double-check the information already received. The interviewees were given the option of remaining anonymous. As a result some of the interviewees are quoted as respondents.

Also, the CRiSMART case study by Jesper Grönvall, *Managing Crisis in the European Union: The Commission and Mad Cow Disease*, was extremely useful in developing the research. It provided very important insight into how the Commission dealt, and to some extent is still dealing, with the BSE crisis.

#### 1.4 SETTING THE STAGE

The first case of Bovine Spongiform Encephalopathy (BSE) was found in Britain in 1986 and since then a number of BSE cases have been discovered in the EU. BSE is a cattle disease but through consumption it is transferred to humans in the form of Creutzfeldt-Jacobs disease (nv-CDJ). The EU has been taking measures to prevent new incidents of BSE (Grönvall, 2000). Among the measures taken by the EU are surveillance measures for the detection, control and eradication of BSE, a ban on feeding mammalian meat and bone meal to ruminants, and the implementation of a monitoring program, which uses rapid tests to categorize animals at risk. High processing standards have been set since it is believed to be the most effective method for the inactivation of the agents of scrapie and BSE (European Commission, November 30, 2000). Since 1994 it has been prohibited to give bone and meat meal to ruminants since contaminated bone and meat meal is known to be the source of BSE infectivity (European Commission, 15 November 2000a). However, new incidents of BSE in cattle born after 1995 have turned up in the member states and this has led to serious concerns within the EU. Iceland banned the use of meal made from ruminant offal in ruminant feed already in 1978.

A lengthy debate took place in the Commission between November 1997 and January 1999 about the possibility of extending the ban on meat and bone meal in ruminant feed to all animal protein including fishmeal. There were also discussions about the danger of blending fishmeal, bone meal and meat meal, and the possibility of using analytical methods to test whether animal protein was present in feedingstuffs or not.

In November 1997, the Standing Committee of Feedingstuffs in the Commission considered to propose an extended ban on the basis that ruminants are herbivores and thus do not need animal protein. Also, it was maintained that it was not possible to distinguish between meat meal, bone meal, and fishmeal in feeds. However, it became clear that it is possible to trace the origin of protein in feed and determine whether it originates from fish or other animals. Following a study by a number of research establishments in Europe and discussions by experts from the EU member states, it was agreed that it is relatively easy to distinguish between proteins originating from land animals and protein from marine animals (Joint PM, 30 November 2000).

In January 1999, the Commission issued a statement that there was no “sanitary reason” to justify an extended ban and that it “did not envisage any proposal banning fishmeal as a feed in ruminant diets” (IFOMA, 16 November 2000).<sup>3</sup> Late November 2000 panic spread

<sup>3</sup> The letter was sent to the Icelandic Association of Fishmeal Manufacturers outlining the strategy of IFOMA and how to deal with the French ban on fishmeal in animal feed. The letter was drafted for the Agricultural Ministers in the EEA. The Icelandic Association forwarded it to the Icelandic Ministry of Fisheries.

in the union when new incidents of BSE were discovered in Germany and Spain, which had until then been thought of as BSE-free countries. A number of new cases had also been found in France, since France had started to test thirty-month-old cattle and conduct more random tests than required by the EU (European Commission, 29 November 2000). In November 2000 ninety-nine incidents had been recorded in France that year, compared to thirty-one cases in 1999 (European Commission, 15 November 2000a).

As a response to this, the French government unilaterally banned all bone and meat meal in animal feed, including fishmeal on November 14, 2000. Fishmeal for farmed fish was excluded. In a Standing Veterinary Committee (SVC) meeting in the Commission on November 15, 2000, France justified the measures by indicating that BSE had been found in ruminants born after the feed ban. 'Cross contamination could not be excluded' (European Commission, 15 November 2000b). In the same meeting, 'Several other member states indicated that, in the absence of a position from the Commission, unilateral measures would also be considered' (European Commission, 15 November 2000b). The Commission did not formally protest against the measures taken by France as a member state can take unilateral action as a precautionary measure against animal disease. In such case, the member state has to notify the Commission about this as the French government had.

After an Agricultural Council meeting on November 20-21, 2000, the Council instructed the Commission to draft a proposal, which included measures to prevent the spread of BSE, and submit it to the SVC before November 30. In a meeting at the Standing Committee for Animal Nutrition (SCAN) in the Commission on November 20-21, experts from the member states stated that the actions taken by the French government were out of proportion. The German representative, for instance, criticized the ban for being too extensive (Respondent B, 2001 personal interview).

The Icelandic Feed, Seed and Fertilizer Inspectorate's notes from the meeting indicated his concerns for Icelandic interests if the France ban extended to the EU level. On November 20, 2000, the Icelandic Embassy in Paris sent the Ministry for Foreign Affairs in Iceland a note stating that the Commission's Agricultural Directorate would not propose a fishmeal ban. In the SVC on November 21-22, 2000, the Commission proposed measures to be taken in the fight against the BSE that did not include a ban on fishmeal in animal feed. The Icelandic representatives got the impression that a ban would not be proposed by the Commission (Respondent K, 2001 personal interview).

On November 24, 2000, the first cases of BSE were discovered in Germany and Spain and panic spread in these countries. The German government immediately changed its position and started to advocate the inclusion of fishmeal in the ban (Respondent C, 2001 personal interview). High-ranking German and French officials began to press the Commission to include fishmeal in the proposal (Icelandic Embassy in Brussels, October – December 2000). Some German politicians also blamed the Commission for not dealing with the BSE crisis (European Commission, 27 November 2000b).

Substantial media coverage of the new BSE cases and consumer fears suddenly threatened public health and agricultural interests in these countries and elsewhere in Europe. The Commission was under considerable pressure to accept the French and German initiative. The unilateral reaction of some member states could undermine the power of the Commission as being responsible for the Common Agricultural Policy (CAP) and jeopardize the homogeneity of the internal market (Icelandic Embassy in Brussels, October – December 2000). The collapse of the beef market would put severe strain on the EU agricultural budget



since EU beef markets had seen a significant drop in prices and beef consumption as BSE spread across Europe.

On November 29, 2000, the Icelandic government learned about the Commission's proposal to include a ban on fishmeal in animal feed. The next day the Commission's proposal was submitted to the SVC. The proposal included: measures such as a temporary ban on feeding meat and bone meal (MBM), including fishmeal, to all farm animals except for farmed fish, pets and fur-bearing animals; a requirement that all animals over 30 months be tested for BSE to enhance consumer confidence; a destruction scheme to remove all cattle aged over 30 months from the food chain unless they have been tested for BSE in order to ensure additional guarantees and to rebalance the beef market; public intervention in order to address the current drop in producer prices; and to raise the advances paid for beef premiums from the current rate of sixty percent to eighty percent in order to ease the financial pressure on beef producers (European Commission, 27 November 2000b). The estimated cost of testing animals over thirty months was estimated to be twelve billion Euros and the EU would pay seventy percent of the cost. If agreed upon, the proposal would put severe pressure on the EU agricultural budget. The justification of the strict measures in the proposal can be found in the explanatory memorandum of the Commission stating that:

Certain member states have reported deficiencies in the implementation of Community legislation on animal feed ... and that Community inspections have identified systematic failures in the implementation of Community rules in several member states and as a consequence, adopted safeguard measures (European Commission, 30 November 2000).

A period of intensive bargaining took place in the SVC. The proposal did not reach a qualified majority and was then transferred to the Agricultural Council, where a meeting took place on December 4, 2000. The Council accepted most of the Commission's proposal except for the ban on feeding animals with fishmeal. Fishmeal would be allowed in animal feed with the exception of ruminants (i.e., cattle, sheep and goats).

## *2 Institutional Framework*

### 2.1 THE EEA AGREEMENT

The EEA Agreement came into force in January 1994. Its aim was to unite the EU and the EFTA states (Norway, Iceland, Finland, Sweden and Austria) into a single market regulated by the same basic rules *Acquis Communautaire* (EFTA, 2001b). Finland, Sweden and Austria joined the EU a year later and Liechtenstein joined the EEA in 1995. As a result, only Iceland, Norway and Liechtenstein are left on the EFTA/EEA side. The Agreement covers the so-called 'four freedoms': free movement of goods, persons, services and capital. Iceland and the other two EFTA/EEA states have adopted around eighty percent<sup>4</sup> of the EU law and regulations. The EEA Agreement does not cover the Common Agricultural Policy (CAP) and the Common Fisheries Policy (CFP), but contains provisions on several aspects of trade in

---

<sup>4</sup> This information came from the Icelandic Ministry for Foreign Affairs. However, it is difficult to state precisely how many of the EU laws and regulations that the EFTA/EEA states have implemented.



agricultural and fish products.<sup>5</sup> The EEA is not a customs union; i.e., there is no common external tariff.

During the EEA negotiation process, Iceland insisted on free access for its marine products without participating in the Common Fisheries Policy (Gsthöhl, 1996). Iceland succeeded in getting customs free access to the bulk of marine products, even though certain products such as lobster and herring remain outside the Agreement (Icelandic Ministry for Foreign Affairs, 2000).

In the case of Iceland, the Agreement covers animal feed but not animal health, except for fish and fish products. The fishmeal ban indicates how confusing this can be. If the Commission had submitted its proposal on November 30, 2000, to the Standing Committee on Animal Nutrition (SCAN), Iceland would have been bound to implement the decision. But since the proposal went through the SVC, Iceland did not have to transpose the decision into national law.

The EEA Agreement is based on a two-pillar cooperation between the EEA states and the EU. The Agreement is dynamic which means that new EU legislation needs to be transposed into EEA legislation in areas covered by the Agreement. The main forum for cooperation between the EFTA/EEA states and the EU is the EEA Joint Committee where representatives of the EFTA/EEA states and the Commission meet to discuss how new EU legislation is incorporated into the EEA Agreement. EU member states may attend the meeting but seldom do so (Icelandic Ministry for Foreign Affairs, 2000). The EFTA/EEA states have to speak with a united voice within the Agreement; that is, they have to find a common position to present at the EEA Joint Committee meetings. The Joint Committee meets monthly and ensures the functioning of the Agreement, and settles any disputes that may arise between the EU and the EFTA/EEA states. Before Joint Committee meetings there are bureau meetings where sensitive issues between the EU and EFTA/EEA states are discussed. If a matter is extremely politically sensitive, informal channels might instead be used to find a solution.

The EEA institutions do not have the same supranational authority as the EU institutions. In principle, decisions taken by the EEA Joint Committee need to be transposed into national legislation (EFTA, 2001a). However according to the EEA Agreement, the EFTA/EEA states may refuse to take a particular act in the EEA Joint Committee, and the national parliaments of the EFTA/EEA states have the right to reject the implementation of regulations and directives adopted by the EEA Joint Committee. This has never happened and is unlikely to happen in the future since it would undermine the fundamental principle of the Agreement (i.e., the homogeneity of the single market). A refusal to implement regulations and directives could be interpreted as a suspension of a part of the Agreement or the Agreement itself by the EU.

The Foreign Ministers of the EEA are supposed to meet twice a year in the EEA Council according to the Agreement. The EEA Council deals with political solutions concerning the Agreement and the purpose of the EEA Council meetings is to make ministers aware of the main issues being discussed among the officials. The meetings are carefully planned, the EU state chairing the Council Presidency speaks on the behalf of the EU, and the state representing the three EFTA states speaks for them. There is a very limited scope for free exchange of views between the ministers since the two blocks exchange agreed positions. The relations be-

---

<sup>5</sup> A trade policy for non-EU countries remains outside the Agreement.

tween the EU side and the EFTA side have been smooth except for discussions concerning the financial mechanism of the EEA (Icelandic Ministry for Foreign Affairs, 2000). On the other hand, the EU ministers rarely attend meetings except for the minister holding the Council Presidency. This may indicate their limited enthusiasm for the EEA Agreement.

The Agreement gives the EFTA/EEA states access to decision shaping not decision making within the EU. According to the EEA Agreement, Icelandic experts should have the same access to the Commission as experts from the EU member states when it is gathering information regarding a draft proposal. Furthermore, the Commission is obligated to transmit EFTA/EEA comments to the EU member states, 'but experience shows that it is not possible to rely on the Commission as a very committed advocate, except where the interests of the Commission and the EFTA States coincide' (Thorhallsson, 2001:8).

On the other hand, Icelandic officials do not have access to the Council. They are not allowed to attend working group meetings or Council meetings (Ministry for Foreign Affairs, 2000). Likewise, the EEA/EFTA states are not allowed access to official information passed within the Council (Thorhallsson, 2001). In the negotiations leading to the EEA Agreement, the President of the Commission (President Delors) told the EFTA states that, 'there will have to be some sort of osmosis between the Community and EFTA to ensure that EFTA's interests are taken into account in major Community decisions. But this process must stop short of joint decision-making, which would imply Community membership' (Gsthöhl, 1996:57).

Since the EEA Agreement was ratified, the power of the Commission has changed in relation to the European Parliament, the Council of Ministers, and the European Council. The EFTA/EEA states have no right to consultation or information from these EU institutions (Valdimarsson, 2001). The Commission is the only party dealing with the EFTA/EEA states. This reduces the influence that the EFTA/EEA states have on decision making within the EU as 'the access of the EFTA/EEA states diminishes and is reduced to zero in the forum where the final decision is made' (Icelandic Ministry for Foreign Affairs, 2000:37).

## 2.2 THE ICELANDIC NATIONAL ADMINISTRATION

The national administration of Iceland is considerably smaller than national administrations of the other EEA states, except for Liechtenstein. For instance, in April 2001, 150 people worked in the Foreign Service of Iceland while 1150 people worked in the Norwegian Foreign Service, excluding locally employed personnel. Table 1 shows the number of inhabitants and people employed in Foreign Services of states in the EEA. The size of Foreign Services is in direct connection with the number of inhabitants in the states.

*Table 1: States in the EEA – Size Index*

State	Population (in millions 2000)	Number of people working in the Foreign Service* 2001
Liechtenstein	0.03	29
Iceland	0.3	150
Luxembourg	0.4	206
Ireland	3.8	820
Norway	4.5	1,150
Finland	5.2	1,642
Denmark	5.3	1,663
Austria	8.1	1,397
Sweden	8.9	1,500
Portugal	10.0	2,038
Belgium	10.2	2,103
Greece	10.6	1,810
Netherlands	15.9	3,050
Spain	39.9	2,619
Italy	57.6	4,688
France	59.3	9,800
UK	59.5	5,500
Germany	82.8	6,515

\* Excluding locally employed personnel.

**Sources:** Population data is from the World Fact Book, 2000 (CIA, 2001), and data concerning the number of people working in foreign services was provided by the Foreign Ministry of each country.

Lack of resources in the Icelandic administration affects its ability to participate within the EEA Agreement. The national ministries, their institutions and surveillance authorities do not have enough funds or experts to attend all meetings within the Commission. They have to prioritize what meetings they attend and can not regularly attend meetings in certain committees. For such reasons, the Norwegian administration is more active within the EEA than the Icelandic administration. Norwegian officials attend more meetings within the Commission and they are at times overrepresented in meetings (Thorhallsson, 2001).

In the late 1980s and the early 1990s the Icelandic administration had only a handful of experts on European integration and very few administrative adjustments took place in order to prepare the administration for EEA membership. As a result, the administration had some difficulties working within the EEA Agreement in the mid 1990s. However, in the past few years the capacity of the administration to deal with the EEA Agreement has grown considerable and, at present, it does not have many difficulties working within it. European affairs are becoming increasingly more relevant for Iceland and the administration has gradually adopted similar features to deal with the EEA Agreement as the other EEA states have. Today, expertise on European integration can be found in all ministries. All ministries, except for the Prime Minister's Office, have stationed officials in the Icelandic Embassy in Brussels.

The increased capacity of the administration to deal with European affairs is particularly noticeable in the Ministry for Foreign Affairs. A considerable number of experts in European integration have been hired and they have produced detailed reports on the position of Iceland in Europe. Furthermore, Icelandic Foreign Minister Halldor Asgrimsson, backed by his officials, has taken the initiative in demanding technical changes to the EEA Agreement. Iceland is still reactive in the day-to-day policy-making procedures within the EEA Agreement but the Foreign Service has shown that it is fully capable of working within the Agreement.

### *2.2.1 Increased international activity and the coordination role of the Ministry for Foreign Affairs*

The EEA Agreement and the increased capacity of the Foreign Ministry have enhanced the Ministry's role in international relations and in the coordination process between the other ministries, their institutions and surveillance authorities (Thorhallsson, 2002). In the last four to five years Iceland has become more active within international organizations. For instance, the Government has decided to establish a peacekeeping force, which will participate in peacekeeping operations of the EU, NATO, the United Nations (UN) and the Organization for Security and Co-operation in Europe (OSCE). Iceland took over the Presidency of the Council of Europe for the first time in 1999, which it had always turned down because of limited resources. Also, Iceland is planning to apply for a seat in the Security Council of the UN in 2009-2010 and has become more active within the Food and Agriculture Organizations (FAO) and UNESCO. Furthermore, new embassies have been opened in China, Japan, Canada and Austria. This increased activity goes hand in hand with Iceland's increased activeness within the EEA Agreement. The Foreign Service has demonstrated that it can participate effectively in international organizations. The fishmeal case further indicates the increased confidence of the Ministry for Foreign Affairs and the important role it plays in coordinating EEA matters within the administration.

### *2.2.2 The close relationship between the administration and interest groups*

The fishmeal case revealed the close relationship between the national administration and various interest groups in Iceland. Strong corporatism and concentrated economic interests strongly influence a small state's approach in the international system (Katzenstein, 1985). However, Iceland is not characterized by the same corporatist structure as the other Nordic states (i.e., Sweden, Norway and Denmark) although since 1990 there has been increased corporatism (Gudmundsdottir, 2002).

On the other hand, the smallness of the Icelandic administration and its lack of expertise made it depend on information provided by interest groups. Ministries have worked closely with interest groups, particularly those of farming and fisheries, in forming national policies. It is also evident, as revealed in this case study, that the Icelandic Association of Fishmeal Manufacturers and an individual fishmeal producer played a key role in informing the administration and the Minister for Foreign Affairs about the crisis. The information provided was not always precise but it sounded an alarm and triggered a response from the administra-

tion. It is also interesting to note that the Icelandic Association of Fishmeal Manufacturers worked closely with the administration in dealing with the crisis. The Association provided much needed information for the Government and was involved in the decision-making process from the very beginning.

### *2.2.3 Characteristics of small national administrations*

The Icelandic administration has similar features to those of the small EU member states. The administration of the small EU states is characterized by informality, flexibility, autonomy of officials, and a less hierarchical structure compared to the administrations of the large member states (Thorhallsson, 2000). These characteristics affect their behavior in decision-making processes of the EU and distinguish it from the large states. Furthermore, the small states must prioritize to a greater extent, because their range of interests is different and have limited administrative resources. As a result, the approach of the small EU states towards the Commission differs from the approach of the large ones. Also, the negotiation tactics of the small states can be distinguished from those of the large states. Thus, characteristics of the small national administrations are key factors in explaining the behavior of small states in decision-making processes of the EU and in distinguishing their behavior from the large states (Thorhallsson, 2000).

The size of the Icelandic administration is most comparable to the administration of Luxembourg, as Table 1 demonstrates. The extraordinarily small size of the administration of Luxembourg, compared to other EU member states, means that it has less capacity to participate in the EU decision-making. Thus, Luxembourg must skip a number of meetings and at times Belgium officially represents Luxembourg in the Commission (Thorhallsson, 2000). In the case of Iceland, the administration does not either have the resources to attend all committee meetings in the Commission which it has access to through the EEA Agreement. Furthermore, the Icelandic administration faces a particular dilemma of how to influence decisions within the EEA since it has a limited access to the Commission and has no access at all to information within the Council. Icelandic officials cannot compensate for their limited resources by establishing a special relationship with the officials of the Commission (Thorhallsson, 2000) nor can they adopt a particular negotiation tactics within the Council. They are left out from the main EU decision-making processes and have to find their own way of influencing EU policy-makers.

The fishmeal case reveals that the administrative characteristics of small states (such as greater maneuverability of officials, flexible decision-making and informal communication) are a great advantage when dealing with a crisis.

## 2.3 DECISION-MAKING WITHIN THE COMMON AGRICULTURAL POLICY

A draft proposal from the Commission is usually in the pipeline a long time before it is agreed upon, and the member states have enough time to respond to the draft. When the Commission submitted the proposal to ban fishmeal, it was responding to a crisis in the community and had to act swiftly in order to save the beef market from collapsing and to restore consumer confidence within the Union. Member states were taking unilateral measures, which were



in principle contrary to the aims of the EU, and were accusing the Commission of reacting slowly to the crisis.

The responsibility for BSE within the Commission is shared between the Agricultural Directorate and the Directorate for Health and Consumer Protection. Following the BSE crisis, the Directorate for Health and Consumer Protection is responsible for scientific committees relating to food safety. Consumer protection has been emphasized at the Community level and should “be taken into account when defining and implementing other community policies” (European Commission, 2001).

In the Standing Veterinary Committee (SVC) the member states can monitor proposals from the Commission through their national representatives.<sup>6</sup> The SVC is a regulatory committee, which means that the Committee’s opinion is binding for the Commission. It cannot adopt measures unless the Committee agrees by a qualified majority. If the Committee delivers an adverse opinion or no opinion, the relevant proposal has to be sent to the Council, and the European Parliament has to be informed. The Council may act by qualified majority voting within 3 months. If Article 17 of Directive 89/662/EEC is applicable, as was the case in this matter, the Council has fifteen days to act.

According to the EEA Agreement, Iceland has an observer status in the SVC on items related to fish and fish products. This means that Icelandic representatives can speak but do not have the right to vote on these issues. Iceland does not have the right to be present at SVC meetings discussing animal health except for aquatic animals. (Icelandic Embassy in Brussels, October – December 2000). The Chairman of the committee, who comes from the Commission, has, so far, informally accepted more extensive participation in the meetings. On the other hand, he has stated that the Icelandic representatives should not take for granted that they will be allowed to be present when the Committee discusses BSE matters (Icelandic Embassy in Brussels, October – December 2000).

The usual procedure within the SVC is to reach an agreement. The Commission can amend a proposal or it may have a few meetings before an agreement is reached. On November 30, the Commission decided to take the matter to the Council without amending the proposal in order to reach an agreement in the SVC. The Commission requested a vote knowing that it would not get a qualified majority. However, this would mean that the proposal would automatically be on the agenda at the next Council meeting. The inflexibility of the Commission shows that it wanted the matter to be immediately decided at the next Council meeting. This indicates the political importance of the case from the Commission’s point of view (Respondent Z, 2001 personal interview).

During the BSE crisis, the Commission set up an advisory committee, the Scientific Steering Committee (SSC), which gives recommendations to the Commission. However, the Commission is not bound by its advice. As later elaborated upon, the Commission’s proposal on November 30 concerning the fishmeal ban was justified by a report from the SSC.

### *3 Chronology<sup>7</sup>*

The duration of the crisis at hand spans from November 14, 2000, when the French Government made a unilateral decision until December 4, 2000, when the EU Agricultural Council

---

<sup>6</sup> The comitology system has been in force within the CAP since 1962. (European Commission, 2001).



decided to prohibit feeding farmed animals (used in food production) with processed animal protein, excluding fishmeal.

November 13 – The Chairman of the Icelandic Association of Fishmeal Manufacturers, Jon Reynir Magnússon, calls an official in the Ministry of Fisheries, Dorothea Johannsdóttir. The chairman states that BSE has been discovered in France and that the French media is reporting that bone and meat meal in animal feed will be banned. The media does not state whether fishmeal will be included in the ban.

**November 14** – The French Government bans all bone and meat meal in animal feed, including fishmeal and fish oil, starting from November 15. Fishmeal for aquaculture is excluded from the ban.

**November 15** – The ban takes effect.

There is a Standing Veterinary Committee (SVC) meeting in the Commission. France explains its actions concerning the BSE crisis. Spain and Austria explain their unilateral actions for dealing with the BSE crisis. Several other member states demand the Commission to act or, otherwise, they threaten also to take unilateral measures to tackle the BSE crisis. In particular, Italy expresses its concern. The Commission announces that national measures taken by the member states will be subject to scientific and legal examination. The Commission presents a draft decision aiming to establish rules for applying tests on bovine animals. It is agreed that this draft decision will be discussed at the next Agricultural Council meeting on November 20-21, as well as a proposal submitted by the Commission at the SVC meeting on November 22. The Commission states that it will keep all measures under review to protect public health, such as the ban of mammalian meat meal and bone meal fed to ruminants.

The Chairman of the Icelandic Association of Fishmeal Manufacturers informs the Icelandic Ministry of Fisheries that the French authorities have stopped a shipment of fishmeal from Denmark to France.

**November 16** – The Icelandic Ministry of Fisheries receives information from the Icelandic Feed, Seed and Fertilizer Inspectorate, Ólafur Guðmundsson who represents Iceland in the Standing Committee on Animal Nutrition (SCAN), that France has banned fishmeal and fish oil in animal feed.

The Permanent Secretary of the Icelandic Ministry of Fisheries, Þorsteinn Geirsson, and Dorothea Johannsdóttir, call the Icelandic Ambassador in France, Sigríður Snaevarr, to seek information.

The Icelandic Embassy in Paris calls the French Ministry of Agriculture to seek information about the news concerning the ban. The Ministry states that the ban has taken effect.

The Icelandic Ambassador in Paris sends this information to the Permanent Secretary at the Icelandic Ministry of Fisheries and the Director of the Department of External Trade, Stefan Haukur Johannesson, in the Icelandic Ministry for Foreign Affairs.

The Icelandic Embassy in Paris forwards the information to the Icelandic Fisheries Counselor, Snorri Palmason, at the Icelandic Embassy in Brussels.

---

<sup>7</sup> The chronology is build on information from the GroPro database in the Ministry for Foreign Affairs

The Icelandic Association of Fishmeal Manufactures forwards a letter from the International Fishmeal and Oil Manufactures' Association (IFOMA) to the Icelandic Ministry of Fisheries. The letter lays out the strategy of IFOMA on how to prevent other EU member states from adopting similar bans and to challenge the French ban on the basis of scientific data. Attached to the letter is a copy of the French ban of fishmeal in animal feed.

**November 17** – The Icelandic Ministry of Fisheries forwards the letter from IFOMA and the French ban to the Icelandic Foreign Ministry and the Icelandic Fisheries Counselor in Brussels.

The Icelandic Fisheries Counselor forwards the information from the Icelandic Embassy in Paris to the Icelandic Ministry of Fisheries indicating that fishmeal and fish oil is being banned in animal feed.

Dorothea Johannsdottir from the Icelandic Ministry of Fisheries and Nikulas Hannigan from the Icelandic Ministry for Foreign Affairs write a 'Poir Memoir' (PM) in English protesting the French action. The PM mainly contains information that has been provided by the Icelandic Feed, Seed and Fertilizer Inspectorate. He approves the letter.

The Icelandic Ministry for Foreign Affairs sends the PM to the French Minister of Agriculture and Fisheries, Jean Galvany, and the French Ambassador in Iceland.

The Icelandic Ministry for Foreign Affairs requests that the Icelandic Embassy in Brussels sends the PM to the Director General for Health and Consumer Protection in the Commission (Mr. Coleman), the French Permanent Representation to the EU, and the EFTA Surveillance Authority (ESA).

The Icelandic Fisheries Ministry sends the PM to the Icelandic Embassy in Sweden.

The PM is sent to the Danish and Norwegian Ministries of Fisheries.

**November 20** – The Icelandic Commercial Counselor in France discusses the ban with an official from the French Ministry of Agriculture and Fisheries.

The PM is translated into French by the Icelandic Ministry for Foreign Affairs.

The Icelandic Ambassador in Sweden, Hörður H. Bjarnason, sends the Swedish Minister of Agriculture, Margareta Winberg, the Icelandic PM and a letter written by the Icelandic Foreign Ministry and Icelandic Fisheries Ministry.

**November 20-21** – The Agricultural Council agrees on a number of measures to tackle the BSE crisis. The Council instructs the Commission, on the basis of the opinion of the Scientific Steering Committee (SSC), to draft another proposal to deal with the crisis and to submit it to the Standing Veterinary Committee (SVC) before November 30. The Council does not give its opinion on the measures taken by France but requests that the member states adopting national measures notify the Commission of them within 24 hours. The Commission will respond to the French report on November 30.

The Standing Committee on Animal Nutrition (SCAN) meeting is held. The Icelandic representation consists of three representatives: Olafur Gudmundsson – from the Feed, Seed and Fertilizer Inspectorate, Snorri Runar Palmason – the Icelandic Fisheries Counselor in Brussels, and Gudjon Atli Audunsson – an expert from the Icelandic Fisheries Laboratories (he was present at the meeting discussing a dioxin issue). The Feed, Seed and Fertilizer Inspectorate distributes the Icelandic PM regarding the French measures. Experts from the

member states, including a German expert, criticize the French action for being out of proportion.

A SVC meeting is held. The proposed measures by the Commission against the BSE bear no indications of a fishmeal ban. Icelandic officials conclude that the Commission will not propose measures banning fishmeal in animal feed.

**November 22** – The Icelandic Ministry for Foreign Affairs requests the Icelandic Embassy in Paris to send the French PM to the French Minister of Agriculture and Fisheries.

**November 23** – The Icelandic Embassy in France sends the French Minister of Agriculture and Fisheries the Icelandic PM dated November 17.

**November 24** – The first BSE cases appear in Germany and Spain.

**November 27-28** – A report published by the Scientific Steering Committee (SSC) on the scientific basis for banning animal protein in feed for all farmed/domestic animals, including pig, poultry, fish and pet animals.

**November 27** – At a Ministry for Fisheries meeting about the reaction of France and the EU to BSE, a representative from the Icelandic Association of Fishmeal Manufacturers states that Germany has banned all bone and meat meal in animal feed including fishmeal and fish oil.

**November 28** – The European Commissioner for Health and Consumer Protection, David Byrne, demands in a press release that Germany and Spain adopt stricter measures to tackle the BSE crisis. He feels particular attention should be given to the removal of specific risk materials from animal feed and human food as well as to the correct pressure treatment of meat and bone meal.

An official from the Icelandic Ministry for Foreign Affairs, who was present at the November 27th meeting, requests that the Icelandic Embassy in Berlin check whether the claim by the Icelandic Association of Fishmeal Manufacturers is correct and requests that they forward a copy of the regulation to the Ministry.

**November 29** – The Icelandic Embassy in Berlin informs the Foreign Ministry that the German Government has proposed a bill in the German Parliament about a permanent ban on bone and meal in animal feed including fishmeal and fish oil. The bill is regarded as a priority in the Parliament. The Embassy claims that it had earlier received verbal information that fishmeal was not going to be included in the proposed bill.

The PM is changed and sent to the Icelandic Embassy in Berlin, which distributes it.

The Icelandic Embassy informs the assistant of the German Minister of Health about the Icelandic position. The Icelandic Ambassador in Germany, Ingimundur Sigfusson, talks to the German Minister of Health, Andrea Fischer.

The Icelandic Ambassador in Germany has a prearranged dinner engagement with the special advisor to the German Chancellor for Foreign Affairs and Defense, Michael Steiner. The Ambassador uses this opportunity to discuss the proposed bill in the German Parliament and presents the Icelandic PM.

The Fisheries Counselor in the Icelandic Embassy in Brussels receives information through informal channels regarding the Commission's proposal. At the SVC meeting on November 30, the Commission intends to propose a ban on using fishmeal and fish oil in animal feed, with the exception of farmed fish, pets, and fur-bearing animals. The Fisheries Counselor forwards this information to the Icelandic Ministry of Fisheries, which contacts the Icelandic Ministry for Foreign Affairs. Later, the Chairman of the Icelandic Association of Fishmeal Manufacturers calls the Icelandic Ministry of Fisheries and argues that the proposal has been accepted by the Commission.

The Icelandic Foreign Minister, Halldor Asgrimsson, receives a phone call in the evening from a fishmeal producer on the east coast of Iceland informing him of the Commission's proposal.

The Icelandic Foreign Minister contacts the Permanent Secretary of State, Sverrir Haukur Gunnlaugsson. They decide to call all Ambassadors of EU member state in Iceland to a meeting the following day at the Icelandic Ministry for Foreign Affairs.

**November 30** – A meeting with the Ambassadors takes place in the Icelandic Ministry for Foreign Affairs. The French, Danish, German and the Finnish Ambassadors, the Deputy Head of the British Delegation, and the EU Ambassador to Iceland and Norway are present at the meeting. Also officials from the Icelandic Ministry of Fisheries and representatives from the Icelandic Association of Fishmeal Manufacturers attend the meeting. The Icelandic PM and other documents about the effects of the proposed fishmeal ban for Iceland are given to the Ambassadors.

The Icelandic Ministry for Foreign Affairs sends information (including trade figures for herring and capelin meal) from the meeting to the Icelandic Embassies in Berlin, Brussels, Paris, London, Copenhagen, Helsinki, Stockholm and Oslo.

The Icelandic Minister for Foreign Affairs talks to the Danish Minister, Ritt Bjerregaard, and two other EU Ministers responsible for agriculture and fisheries. He also tries to contact the Director General for Health and Consumer Protection in the Commission but is unable to reach him, but he is able to talk to the next person in line.

The Icelandic Ambassador in Sweden sends the Swedish Minister of Agriculture a letter requesting that Icelandic concerns be heard at the Council meeting scheduled for December 4.

The Icelandic Ambassador in Denmark, Helgi Agustsson, meets the Director of N-3 at the Danish Ministry of Foreign Affairs, Karsten Vagn Nielsen.

The Icelandic Ambassador in Finland, Kornelius Sigmundsson, telephones the Director of External Trade at the Finish Ministry for Foreign Affairs, Eikka Kosonen.

The Icelandic Ministry for Foreign Affairs issues a press release in Iceland.

The Icelandic Ambassador in Germany meets the German Federal Minister for Food, Agriculture and Forestry (Karl-Heinz Funke) and the Chairman of the German Agricultural Association (Philip Freiherr von dem Bussche). He also meets Ulrike Höfken who is a Parliament Member for the Bundies90/Die Grunen as well as the party's spokesperson in this area and Vice-President of the Agricultural Committee in the German Parliament.

The Icelandic Embassy in Berlin sends a German translation of the PM to the German Federal Minister for Food, Agriculture and Forestry, the German Minister of Health, the special advisor to the German Chancellor for Foreign Affairs and Defense, the Vice-President of

the Agricultural Committee in the German Parliament, and a Social Democratic Parliament Member for Cuxhaven (Annette Fasse).

The Bundestag ratifies the bill banning fishmeal in animal feed in Germany. The Icelandic Embassy immediately receives the information after the Agricultural Committee meeting in the German Parliament.

A SVC meeting is held. The Commission submits its proposal that bans all bone and meat meal in animal feed, including fishmeal and fish oil. Fishmeal for farmed fish, pets and fur-bearing animals is excluded. The Icelandic Ambassador, Gunnar Snorri Gunnarsson, and the Fisheries Counselor in Brussels attend the meeting. They present a slightly altered version of the PM. At the meeting, Iceland and Norway issue a joint PM built upon the Icelandic PM. (Norway had not prepared its own PM prior to the meeting). The proposal does not gain a qualified majority and is automatically sent to the Agricultural Council. The Council is scheduled to meet on Monday, December 4, to make the final decision.

**December 1** – The Icelandic Foreign Minister states in the Icelandic media that specific attempts will be made to discuss the Commission's proposal with the member states that had abstained from voting in the SVC (i.e., Denmark and Ireland) as well as with the Netherlands, which had had reservations about the proposal.

The PM in German is sent to the German Foreign Ministry.

The Icelandic Minister of Fisheries, Arni Mathiesen, writes a letter to the Ministers of the EU member states responsible for agriculture and fisheries. Several documents are sent with the letter asserting Iceland's position: a letter from the Icelandic Chief Veterinary Officer, a letter from the Directorate of Fisheries in Iceland, and the PM. The letter and documents are sent via telefax.

The Icelandic Minister for Foreign Affairs calls the Danish Minister for Food, Agriculture and Fisheries, Ritt Bjerregaard, and informs her about the Icelandic position. This is the second time they talk on the phone about the crisis.

The Icelandic Ambassador in Germany receives a letter from the German Trade Organization for Grain and Feeding Stuff in Germany. In the letter, the organization requests assistance from the Ambassador to try to prevent the German Parliament from banning fishmeal in animal feed.

The Icelandic Ambassador in Finland meets the Finnish Director of External Trade, Kosonen, and delivers the PM. An official who deals with Icelandic matters in the Finnish Ministry for Foreign Affairs (Caj Söderlund) is also present.

Icelandic Ambassador in Britain (Thorsteinn Pálsson) meets the Head of the Division for Central and North-Western Europe at the British Ministry for Foreign Affairs (John Ramsden) and delivers the Icelandic PM. He also meets an official, in the Ministry responsible for agricultural, fisheries and food (Kate Timms). Members of the Agricultural Committee in the British Parliament are informed about the Icelandic position. The Ambassador also informs the Ministries for Foreign Affairs in Ireland, Holland and Greece are also informed.

The Icelandic Ministry for Foreign Affairs sends a press release to various newspapers specializing in European matters: European Report, Agence Europe, and Financial Times.

The Icelandic Minister for Foreign Affairs and the Icelandic Minister for Fisheries give the Icelandic Government a report on the progress of the case.



The Icelandic Ambassador in Brussels attends a Schengen Council meeting. He uses the opportunity to informally discuss the fishmeal case with some of the Ambassadors, in particular the French and the Spanish Ambassadors.

Norway holds the Schengen Presidency and invites all Ambassadors to a lunch reception, and the Icelandic Ambassador in Brussels uses the opportunity to speak to the French Ambassador.

The Bundesrat ratifies the bill banning fishmeal in animal feed.

**December 2** – The German bill takes effect banning fishmeal and fish oil in animal feed in Germany. The ban has no time restrictions.

**December 4** – The Agricultural Ministers have a meeting in the Council building in Brussels. Icelandic diplomats have access to the Council building, because Iceland is a member of Schengen, and talk to member state representatives outside the meeting room.

The Agricultural Council decides on measures concerning certain protective measures with regard to transmissible spongiform encephalopathies and the feeding of animal protein. According to the decision, member states should prohibit the feeding of processed animal protein to farm animals that are kept, fattened or bred for the production of food. Fishmeal used in animal feed for non-ruminants is accepted.

### 3.1 AFTERMATH

After the Council's decision on December 4, it was in the hands of the Commission to submit a proposal concerning under which conditions fishmeal should be manufactured and transported. On December 14, the Icelandic Ministry of Fisheries received information from the IFOMA regarding a new proposal from the Commission, which was a *de facto* ban on fishmeal in animal feed.

The Commission proposed that vehicles used to transport fishmeal should be authorized and used exclusively for that purpose. Furthermore, fishmeal should only be produced in plants manufacturing animal feed which did not also prepare feed for ruminant animals and which were authorized for that purpose by the appropriate authorities. Moreover, the feed should be labeled indicating that the feed contains fishmeal and should not be fed to ruminants. Also, bulk feed containing fishmeal could only be transported in vehicles, which had not also been used to transport feed for ruminants. The use and storage of feed containing fishmeal would be prohibited at farms where ruminants are kept, fattened or bred for the production of food.

Since Iceland is an island, it would be very expensive to transport fishmeal to Europe if the vessels could not transport anything else as well. The Icelandic Government, in its comments and amendments to the proposal, pointed out that it was indirectly implied that fishmeal was an ingredient carrying BSE, since the labeling of feed should state that it contained fishmeal and could not be fed to ruminants.

The Icelandic administration received information about the proposal late. Norway was represented at the Committee meetings, where the issue had been discussed, but it did not inform Iceland about the discussions (Icelandic Embassy in Brussels, October – December 2000). The Icelandic administration again reacted in a similar way. It used its traditional dip-



omatic channels and its access to the SVC to influence the decision makers. In this case, Iceland's access to the SVC was more important since the final decision was taken there because of the technical implementation of the Council decision on December 4. The Commission amended the proposal and an agreement was reached in the SVC. Iceland was satisfied with the outcome; fishmeal and other kinds of meal could be transported in the same vehicle but not at the same time.

#### *4 Decision-Making Occasions*

In this section, the crisis caused by the Commission's proposal is divided up into five critical decision occasions.

<b>Decision Occasions</b>	<b>Type of Decision</b>
1. The French Government bans all bone and meat meal in animal feed, including fishmeal and fish oil. November 14, 2000.	Group
2. The German Government proposes a ban on fishmeal in animal feed in Germany. November 27, 2000.	Group
3. The Icelandic Minister for Foreign Affairs receives a phone call informing him of the proposal by the Commission to ban fishmeal and fish oil in animal feed. November 29, 2000.	Individual
4. The Commission proposes a ban on using fishmeal and fish oil in animal feed. November 30, 2000.	Group
5. The SVC sends the Commission's proposal to the Agricultural Council. November 30, 2000.	Group

##### 4.1 THE FRENCH GOVERNMENT BANS ALL BONE AND MEAT MEAL IN ANIMAL FEED, INCLUDING FISHMEAL AND FISH OIL.

The first warning sign in the crisis came when the Icelandic Association of Fishmeal Manufacturers informed the Fisheries Ministry that bone and meat meal in animal feed would be banned in France. It did not know whether fishmeal would be included in the ban. The following day, the French Government banned all bone and meat meal in animal feed, including fishmeal and fish oil. Iceland's immediate reaction was to seek more information about the French action. On November 17, the Icelandic Government officially protested against the French fishmeal ban. Governments in Denmark, Norway and Sweden, and the Director General for Health and Consumer Protection in the Commission were informed about the Icelandic position. In the days that follow, Iceland continued to notify the French administration of its interests and the Icelandic representatives in Brussels followed the developments in the Commission.

The French decision increased the pressure on the Commission to react to the new incidents of BSE in France. At a Standing Veterinary Committee (SVC) meeting on November 15, several member states demanded action by the Commission otherwise they threatened to take unilateral measures to tackle the BSE crisis. However, the proposed measures to be taken

by the Commission at the SVC meeting on November 20–21 bore no indication of a fishmeal ban.

On November 20–21 the Agricultural Council instructed the Commission to adopt further measures and to submit them to the SVC on November 30. At a Standing Committee for Animal Nutrition (SCAN) on November 20–21, experts from the member states criticized the French action for being out of proportion. Thus, the Icelandic Government continued to protest solely against the French ban and it did not emphasize information gathering and lobbying in Brussels and in the other member states. It was perceived that the crisis situation was limited to the French decision and it was not expected to extend to the EU level.

#### 4.2 THE GERMAN GOVERNMENT PROPOSES A BAN ON FISHMEAL IN ANIMAL FEED IN GERMANY.

The first BSE cases were discovered in Germany and Spain on November 24. Substantial media coverage followed, concerning the threat BSE posed to humans. A German expert was among those who had criticized the French action for being out of proportion at the SCAN meeting on November 20–21. Earlier, it had appeared as if the German Government was against the French initiative and the Icelandic administration had not picked up any signs of a possible change in opinion. The Icelandic Government had received no indication of a German ban until a representative from the Icelandic Association of Fishmeal Manufacturers stated on November 27 at a meeting at the Icelandic Ministry of Fisheries that such a ban had already been implemented in Germany. The following day the Ministry for Foreign Affairs requested the Icelandic Embassy in Berlin to look into the matter.

The day after, November 29, the Ministry received information from the Embassy that the German Government had indeed proposed a bill in the German Parliament, which included a permanent ban on fishmeal in animal feed. The bill was regarded as a priority in the Parliament but had not yet been accepted. The Icelandic Embassy stated in its report to the Ministry for Foreign Affairs that it had earlier received verbal information that fishmeal would not be included in the bill. The Icelandic Government had limited time to respond since the bill was supposed to be voted upon the following day, on November 30.

Crucial time had been lost due to lack of information. Nonetheless, the Icelandic Embassy in Berlin immediately started intensive lobbying. For instance, the Ambassador talked to two Ministers and a number of MPs involved in the decision-making process in an attempt to exclude fishmeal from the bill. Thus, the Icelandic Embassy responded quickly and effectively to the news of the bill but failed to gather information about it in time to influence the decision (i.e. to exclude fishmeal from the bill). It is particularly interesting that the Icelandic Association of Fishmeal Manufacturers informed the Icelandic administration about both the French and the German bills and that it came as a total surprise for the Icelandic administration. The first bit of information was not detailed but it quickly initiated a response by the Icelandic administration that led to ‘the discovery’ of the bill in the German Parliament and the French decision.

### 4.3 THE ICELANDIC MINISTER FOR FOREIGN AFFAIRS RECEIVES A PHONE CALL INFORMING HIM OF THE PROPOSAL BY THE COMMISSION TO BAN FISHMEAL AND FISH OIL IN ANIMAL FEED.

On the eve of November 29 a fishmeal producer from the east coast of Iceland initiated a swift response from the Iceland administration by making a direct phone call to the Icelandic Minister for Foreign Affairs, Halldor Asgrimsson. The fishmeal producer informed the Minister about the Commission's proposal to ban fishmeal and fish oil in animal feed and that a decision would be taken the following day at a SVC meeting. The fishmeal producer seems to have taken the initiative to call the Minister himself. He was able to look up the Minister's phone number in the Icelandic phone directory since some Ministers' phone numbers can be found there. The news caught the Minister by surprise even though his Ministry already knew of the proposal.

Asgrimsson immediately called the Permanent Secretary of State in the Foreign Ministry. They decided to call all the EU Ambassadors in Iceland to a meeting in the Ministry for Foreign Affairs the following day. This was a very unusual measure to take since such a meeting with so many Ambassadors had never taken place before in the Ministry (Interviews with officials, 2001). One official, for instance, pointed out that nobody could remember such a meeting during the cod wars. The Minister's initial reaction clearly reveals that he considered the matter to be very serious. The Minister regarded the case to be a high priority and felt that no time should be lost in convincing the Commission to change its proposal and in persuading the member states to reject it. One of the Ministry's most intensive lobbying campaigns was about to begin.

### 4.4 THE COMMISSION PROPOSES A BAN ON USING FISHMEAL AND FISH OIL IN ANIMAL FEED.

On November 29 the Fisheries Counselor in the Icelandic Embassy in Brussels received information, through informal channels, regarding the Commission's proposal to temporarily ban all bone and meat meal in animal feed, including fishmeal. He forwarded this information to the Ministry of Fisheries in Iceland, which contacted the Ministry for Foreign Affairs. The following morning, when all of the relevant decision makers in Iceland were aware of the proposal, the Ministry for Foreign Affairs started a very intensive lobbying campaign in the EU member states and within the Commission. The Ministry coordinated the lobbying activities, and got the Ministry of Fisheries and the Icelandic Association of Fishmeal Manufacturers involved. They were, for instance, represented at the EU Ambassadors' meeting in the Ministry, which had put a lot of effort into organizing the meeting.

Furthermore, all Icelandic Embassies in the EU member states were activated and were sent trade figures for herring and capelin meal in Iceland. They were ordered to start immediately intensive lobbying against the proposal. In addition, the Minister for Foreign Affairs personally called three Agricultural Ministers in Europe and the Director General for Health and Consumer Protection in the Commission.

It is interesting to note how much effort was put into lobbying in the member states in order to get them to reject the proposal in the SVC meeting and how active the Icelandic Embassies were in this cause. The Permanent Secretary of State directed the Icelandic Ambassadors to arrange meetings with Ministers and high-ranking officials. This was done in parallel

with other decisions taken to deliver the Icelandic position in every possible moment and place within the EU member state administrations. To be able to deliver information to the highest-ranking officials and politicians, it was decided that the Ambassadors should visit in person. The Ambassadors were also encouraged to gather information from the member states on their positions regarding the Commission's proposal.

A data and communication center was set up within the Ministry for Foreign Affairs where all information about the case was stored. All officials working on the case in the Foreign Service had access to the system which was of vital importance for keeping all relevant officials informed about the case and for speeding up the decision-making process.

In Brussels, the Icelandic Ambassador, Gunnar Snorri Gunnarsson, went to the SVC meeting with three other Icelandic representatives. The Ambassador had never attended a SVC meeting before and his presence at the meeting was to emphasize the importance of the matter for Iceland. Before the meeting, a decision had been reached by the Icelandic Ministry for Foreign Affairs to emphasize scientific arguments (i.e., that no scientific evidence justified a ban on using fishmeal in animal feed). This strategy was thought to be more effective since the EU and its member states were facing huge problems and financial losses due to the BSE crisis. Emphasizing the financial loss for Iceland was thought to be less effective.

#### 4.5 THE SVC SENDS THE COMMISSION'S PROPOSAL TO THE AGRICULTURAL COUNCIL.

The Commission's proposal at the SVC meeting on November 30 did not get a qualified majority and thus was automatically sent to the Agricultural Council, which was to meet on Monday, December 4. Once again Iceland had very limited time to respond before a decision would be reached. Also, the lack of Icelandic representation in the Council made its position more difficult. Iceland's reaction to the new development was to send a letter to all the Agricultural Ministers of the EU member states. The letter was written by the Icelandic Minister of Fisheries, Arni Mathiesen, and was sent with two other letters from the Icelandic Chief Veterinary Officer and Directorate of Fisheries via telefax. For the first time, the Icelandic Ministry of Foreign Affairs sent a press release to a number of newspapers specializing in European matters.

Discussions took place in the Icelandic Ministry for Foreign Affairs about the possibility of calling an extraordinary EEA Joint Committee meeting. The possibility was rejected for the time being because the intensive lobbying campaign by the Icelandic Embassies in the EU member states was thought to be more effective. However, the Commission was informed that if its proposal would be accepted at the Agricultural Council meeting, it should then also prepare itself for an EEA Joint Committee meeting.

The Icelandic Embassies continued its lobbying activities. The Icelandic Ambassador in Brussels used the opportunity to informally discuss the proposed fishmeal ban at a Schengen Council meeting with several EU Ambassadors. Furthermore, Icelandic officials utilized Iceland's right of access to the Council building where the Agricultural Council meeting was being held. Normally the Council building is officially closed for non-member states; however, Iceland has access to the building since it is a Schengen member. The Icelandic Ambassador in Brussels decided to send officials to the Council building as a symbolic gesture for emphasizing the political importance of the matter for Iceland. The Ambassador also wanted to in-

formally gather information in the hallway during the Agricultural Council meeting. The Icelandic diplomats were able to find out that Iceland's concerns were being considered and that the use of Icelandic diplomatic relations had been effective (Respondent R, 2001 personal interview).

## 5 *Analysis*

The analysis is built on the cognitive-institutional approach introduced by Sundelius, Stern and Bynander (1997). This approach takes into account that individuals and groups have a major impact on decision making but that structural and institutional constraints also have an effect on decision making (Sundelius et al., 1997). The definition of institution used is: 'formal and informal institutions and conventions, the norms and symbols embedded in them, and policy instruments and procedure' (Bulmber in Grönvall, 2000:17). History and previous experiences have an effect on the structure of the organization, routines, plans and values (Bulmber in Grönvall, 2000). Of the ten themes outlined by Sundelius et al. (1997), six themes were chosen: the decision-making units; experts in decision making; value conflict; information and communication; multilateralization; and learning.

### 5.1 DECISION-MAKING UNITS

The decision-making unit of the Icelandic fishmeal crisis consisted of the Icelandic Minister for Foreign Affairs, the Permanent Secretary of State, an official in the External Trade Department, and the Icelandic Ambassador to the EU in Brussels. All decisions were taken at the highest level within the Foreign Service. This is consistent with the findings in crisis management literature pointing to the fact that important decisions are often taken by a small number of chief executive officials and their close advisers (Bulmber in Grönvall, 2000).

The officials' experience certainly assisted them in making good decisions. The day-to-day coordination of decisions taken in the Ministry was carried out by the External Affairs Department, principally by Nikulas Hannigan. He worked for several years in Brussels for the EFTA Secretariat before joining the Icelandic Foreign Service. Hannigan took over the coordination of the case because the Head of the External Trade Department was temporarily working abroad at the time of the crisis and thus, not involved in the decision-making process. The Permanent Secretary of State, Sverrir Haukur Gunnlaugsson, has been in the Foreign Service for over thirty years. The Icelandic Ambassador in Brussels, Gunnar Snorri Gunnarsson, has been in the Foreign Service for more than twenty years and an Ambassador since 1991. He had been the Icelandic Ambassador to the EU since 1997 and was serving his second term in Brussels as a diplomat. The Minister for Foreign Affairs had been in office since 1995. He was also the Minister of Fisheries for eight years from 1983–1991, which undoubtedly gave him a thorough understanding of fisheries. Hence, he has enjoyed good connections with the fishing industry ever since.

The Ambassador in Brussels played a significant role in the decision making. His extensive experience in Brussels dealing with the EU and the EEA has given him a great insight into decision making in Brussels. It was his suggestion to utilize the traditional diplomatic channels to influence the member states. He also encouraged his officials to enter the Council building while the Agricultural Ministers was having a meeting and making the final decision



about the case. This coincides with the finding that the Permanent Representatives of the small EU member states in Brussels play an important role in EU domestic policy-making (e.g., Thorhallsson, 2000). The Icelandic Ambassadors in the EU member states were important decision makers during the crisis and this was evident by the fact that they had been granted autonomy to decide whom to contact in their respective member states.

It is interesting to note that the main decision makers were in the Ministry for Foreign Affairs and that they took over the task of coordinating the situation. The Ministry for Foreign Affairs had taken over the management of the crisis as soon as the Foreign Minister and the Permanent Secretary of State had taken the decision to call the Ambassadors' meeting. This is particularly interesting because the Fisheries Ministry received information about the German and France actions before the Ministry for Foreign Affairs.

Likewise, the Ministry of Fisheries took direct part in the original response to the French decision. For instance, the original PM was prepared and written in collaboration between the Ministries. The Ministry of Fisheries also directly contacted the Icelandic Embassy in Paris and sent the PM to Sweden, Denmark and Norway. The fact that the Ministry of Fisheries was involved in the case from the very beginning can be attributed to the close relations it had with the Icelandic Association of Fishmeal Manufacturers and the fact that the Fisheries Counselor in the Icelandic Embassy in Brussels was from the Ministry of Fisheries. However, as the crisis unfolded the Ministry for Foreign Affairs took over the coordination of the crisis. The Ministry of Fisheries continued to follow the crisis closely and the Minister of Fisheries made an attempt to influence EU decision makers at the height of the crisis by sending the EU's Agricultural Ministers a letter by telefax. However, at this point the coordination of the crisis was already in the hands of the Ministry for Foreign Affairs, and the Ministry of Fisheries served more as an information channel rather than an active decision-making unit involved in the crisis management. This can be explained by the smallness of the Ministry of Fisheries, which has only twenty officials, and the greater number of experts in European affairs within the Foreign Service. The context of the crisis, created by EU decision makers, also made the Foreign Service more suitable to deal with it. Furthermore, the dominant role of the Ministry for Foreign Affairs in the crisis management indicates its importance in decision making in Iceland and its increased coordination role within the administration.

The main actors in the Ministry of Fisheries were the Minister (Arni Mathiesen), the Permanent Secretary (Thorsteinn Geirsson), and an official (Dorothea Johannsdottir). They coordinated the case on behalf of the Ministry and had close contact with the Foreign Service and the Icelandic Association of Fishmeal Manufacturers.

Looking at how the fishmeal case affected the structure of the bureaucracy, it is obvious that the decision-making power went all the way up to the highest-ranking level in the Ministry for Foreign Affairs; that is, to the Minister himself. In the daily business of the Ministry, the External Trade Department takes all major decisions regarding external trade, without the involvement of the Minister or the Permanent Secretary of State. This procedure was different during the fishmeal crisis. The phone call from the fishmeal producer directly to the Minister may have triggered his close involvement in the case, but it is difficult to draw any concrete conclusions from this. However, it is clear that the Minister's initial reaction to the proposal brought about a swift response within the Ministry. For instance, the Minister involved the Permanent Secretary of State in the case and the Minister immediately became a part of the decision-making team.



Other ministries did not become involved in the decision-making process. The case did not concern the Ministry of Agriculture since Iceland was not obliged to implement the Commission's proposal. The Prime Minister followed the development of the crisis, but he and his office did not become involved in its management. No formal meetings took place between the Minister of Foreign Affairs and the Prime Minister about the crisis. They did, however, talk informally about the crisis with the Minister of Fisheries when they met in the Icelandic Parliament on November 30. The Government was officially informed by the Minister for Foreign Affairs and the Minister of Fisheries about the development of the crisis on December 1 in a prearranged meeting, but it did not make any decisions on the matter.

Another actor that could have become involved in the crisis management was the Icelandic Association of Fishmeal Manufacturers. It had informed the Government about a possible fishmeal crisis and had provided important information for the decision makers to build a case. However, the Association did not become directly involved in the decision-making process.

On the other hand, the Ministry for Foreign Affairs was in close contact with the Icelandic Association of Fishmeal Manufacturers and Ministry of Fisheries, its institutions and surveillance authorities. The Association provided information about the importance of fishmeal for the Icelandic economy in the beginning, and letters from the Icelandic Chief Veterinary Officer and the Directorate of Fisheries in Iceland were used to support the Icelandic position. The Feed, Seed and Fertilizer Inspectorate was also closely involved in the process, particularly in the beginning. No conflicts were identified within the administration regarding the crisis management. The decision-making unit widely consulted relevant bodies within the Icelandic administration and the Fishmeal Association. As a result, the Ministry of Fisheries and the Fishmeal Association did not feel excluded from the decisions taken within the Ministry for Foreign Affairs. Rather, they felt that they were part of the decision-making team.

Thus, all involved actors dealt with the crisis collaboratively. This might be explained by the fact that nearly all, if not all, officials involved had known each other before the crisis occurred. They had been working on EU-related issues and they knew what to expect from each other. Furthermore, the Fishmeal Association was the first to sound the alarm and the Ministry of Fisheries was the first administrative body to get involved. The informal communication between the Ministries on the one hand and between the Ministries and the Fishmeal Association on the other created a good working environment. Also, the flexible decision-making process within the Ministry for Foreign Affairs enabled consultation from actors outside the Ministry. Thus, the characteristics of the small Icelandic administration (informality, flexibility, trust and autonomy of officials) were a great advantage in dealing with the crisis. This coincides with findings that small administrations are able to compensate for their lack of great administrative resources and large administrations (e.g., Thorhallsson, 2001). The shortage of officials within the Icelandic Foreign Service may have affected its ability to gather information but the smallness of the administration contributed to a swift and an efficient response to the crisis.

## 5.2 EXPERTS IN DECISION MAKING

Ever since the BSE crisis broke out, experts have played a prominent role in the decision-making process within the EU (e.g. Grönvall, 2000). In general, the Commission has based its decisions regarding BSE on scientific evidence (Byrne, 2001). This coincides with Grönvall's argument that: 'epistemic communities can be expected to have an important role in the decision-making process i.e. defining, identifying, compromising and supplying arguments which can be used to give legitimacy to certain actions taken' (Grönvall, 2000:26-7).

In a press release after the Agricultural Council meeting in Brussels on November 20–21, 2000, it was stated that the Commission, on the basis of the opinion of the Scientific Steering Committee (SSC), would adopt stricter measures for tackling the BSE crisis before November 30. It was also stated that the SVC would examine other necessary actions at the EU level in order to reinforce food safety and consumer confidence while ensuring the smooth operation of the internal market (European Council, 20 November 2000).

The Commission's proposal on November 30 was based on a report from the SSC, which is an advisory committee to the Commission. In the report it is stated that '...the opinion points out there is no epidemiological evidence that pigs, poultry or fish are susceptible to BSE or that BSE has moved into these species' (European Commission, 27–28 November 2000). On the other hand, the SSC stated:

That in principle the measures recommended in its various opinions will result in cattle feed with a negligible risk. However, it is aware that in practice cross-contamination of MBM<sup>8</sup>-free cattle feed with other feeds which contain MBM is a serious problem which may prolong a BSE epidemic and therefore the risk to the consumer. The SSC recommends that member states conduct a risk assessment of the likelihood of such cross-contamination under their own national/local conditions. If a non-negligible risk is identified, the Committee recommends that a temporary total feed ban applicable to all farmed animals including cattle, pigs, poultry, farmed fish and pets, as proposed by several member states, would be the most effective approach to prevent the propagation of the disease (European Commission, 27–28 November 2000).

The Commission in its proposal agreed that there was no scientific reason for banning fishmeal in animal feed, but the fact that BSE had been discovered after the 1994 meat and bone meal ban and that the danger of cross-contamination was real were sufficient reasons to ban fishmeal in animal feed. It has been a tradition in some of the European countries to mix meat meal and fishmeal in animal feed and the danger of cross-contamination, therefore is considerable since it takes time to change long-standing practices (Respondent B, 2001 personal interview). The Commission argued that implementation in the member states was insufficient, and while surveillance in the member states was not satisfactory, the Commission had to include fishmeal. The Commission pointed to instances where meat meal and fishmeal had been mixed and sold as fishmeal. It argued that this alone was a satisfactory reason for prohibiting the use of fishmeal and fish oil in animal feed. The Commission also hinted at the danger of these two feeds being mixed since fishmeal is expensive in comparison to meat meal.

---

<sup>8</sup> Meat and bone meal.

The SVC meeting took place on November 30. Its aim was to adopt stricter measures, built upon the SSC's opinion, for tackling the BSE crisis. On behalf of Iceland, two representatives were present (which is unusual), one of them being the Ambassador to the EU. Before the meeting started, the Ambassador introduced himself to the Chairman of the SVC in order to emphasize the importance of the matter for Iceland.

At the meeting the Icelandic representative stated that Iceland had a full understanding of the necessity to take firm action to prevent the spread of BSE, but banning fishmeal and fish oil in animal feed was not an appropriate response since no scientific data could show a connection between fishmeal and fish oil with BSE.

Before the meeting, Icelandic decision-makers had decided to emphasize the scientific arguments (i.e., that no scientific evidence justified such an extensive ban), and not the economic effects of the fishmeal ban in Iceland. This strategy was thought to be more effective since the EU and its member states were already facing huge financial losses and problems due to the BSE crisis. The member states would not have been interested in hearing a complaint concerning the economic effects of the fishmeal ban from a state that was not even a member state (Gunnar Snorri Gunnarsson, 6 September 2001 personal interview). It is interesting that this strategy coincided with the strategy recommended by the International Fishmeal & Oil Manufacturers' Association (IFOMA) in a letter, which the Icelandic Association of Fishmeal Manufacturers sent to the Ministry of Fisheries on November 16, 2000. The letter was forwarded to the Foreign Ministry and the Fisheries Counselor in Brussels the day after.

Iceland and Norway felt that banning a product on the grounds of potential misuse was not a satisfactory argument, since all products can be misused. They issued a joint statement protesting the ban to the SVC on November 30, 2000. Iceland had prepared a PM for the meeting, but Norway did not have one when the meeting began. So during a coffee break, small changes were made to the Icelandic PM and then it was issued on behalf of both countries. This was strategically done in order to strengthen the political profile. Also, it is always an advantage if EFTA/EEA countries have a common position when dealing with the EU (Respondent A, 2001 personal interview).

It is interesting to note how the Icelandic government used EU experts to support its case. The Icelandic argument was that the ban was not based on scientific evidence, and therefore could not be justified. The PM stressed that '...there is no evidence that BSE has ever been transmitted via fishmeal' (Joint PM, 30 November 2000).

In 1997, the EU Standing Committee on Feedingstuffs considered banning animal protein in ruminants on the basis that such animals are herbivores and thus do not need animal protein. It was also maintained that it was impossible to distinguish between meat and bone meal and fishmeal in feeds. However, the Joint PM stated that a study from research establishments and experts in the EU member states revealed that it is relatively easy to distinguish between protein originating from land animals and protein from marine animals. Iceland based its opposition to the fishmeal ban on these grounds. The PM stated, 'The ban cannot therefore be justified on the grounds of it being impossible to distinguish between fish and meat meal... [There are] no health grounds for banning the use of feed made from marine products' (Joint PM, 30 November 2000).

During the SVC meeting, the fact that the Icelandic Minister of Fisheries was a veterinarian was raised by the Icelandic officials and without a doubt had an impact on the discus-

sions (Respondent R, 2001 personal interview). This proves that every weapon was used in the 'fishmeal battle'.

The proposal caused intensive debating within the Committee and there was tension in the air. It was obvious that some member states had received clear political instructions about reaching an agreement quickly in order to close the case and to show the public that everything was being done to deal with the crisis (Gunnar Snorri Gunnarson, 6 September 2001, personal interview). The representatives often phoned home to their own administrations to get instructions on how to respond to the proposal (Respondent Z, 2001 personal interview).

The French and German representatives agreed to the proposal. However, the German representative stated that there was no reason to ban fishmeal in aqua feed, pig feed and chicken feed. Nonetheless, Germany supported the proposal in an attempt to tackle the crisis. Germany and Spain had stood in the way of banning meat and bone meal for four years, but the newly discovered cases of BSE in these countries had changed their positions.

At the meeting, some countries agreed with Iceland that the proposal was too extensive. Iceland found support from Britain, but this was only lukewarm since Britain could not propose reductions due to the BSE crisis brewing in Britain. The British representatives said the proposal went too far. They spoke of a shortage of animal feed if the proposal was agreed upon and saw problems concerning implementation. They argued that the scientific report only concerned meat meal and ruminants, and not fishmeal or chicken meal.

The Nordic countries, especially Finland, were against the proposal on the grounds that the measures proposed needed more consideration and were too extensive. The Finnish representatives said if the root of the problem was surveillance, it would be appropriate to take necessary measures to tackle the problem instead of proposing a ban on fishmeal and fish oil. The Swedish representative said the proposal should be discussed at the Council meeting since the decision would be based on political principles, not scientific ones; the ban on fishmeal and fish oil could not be justified by the report from the Scientific Steering Committee (SSC).

At the meeting, the Danish representatives kept a low profile. One explanation might be that Danish marine experts had not attended the meeting, but rather experts in animal diseases. The main concern of Denmark was to ease the meat market. It appeared as if the Danes had not fully comprehended the fact that the measures proposed by the Commission would also affect the Danish fishmeal industry (Respondent Z, 2001 personal interview). The Danish representatives did however say that the ban on fishmeal and fish oil should not be based on the report from the SSC, and felt the proposal went too far by including fishmeal and fish oil. Denmark could consider supporting the ban on meat and bone meal to ruminants, but not the ban on fishmeal and fish oil. The Danish representatives stated that they were not allowed to agree to the proposal, but at the Council meeting the Danish Agricultural Minister might have a different opinion on the matter.

The Belgian representatives had serious concerns about the proposal and the arguments used. Their concerns included implementation, financial matters and what would be done with the animal feed already produced. They argued that if the proposal would be accepted, there would be a shortage of animal feed in the member states.

The representatives from Ireland, the Netherlands and Luxembourg also had reservations about the proposal. Ireland was against the inclusion of fishmeal and chicken meal in the proposal since the scientific report had not mentioned them. Ireland also argued that implementing the proposal would be difficult. The Dutch representatives said the proposal went



too far concerning animal health; however, they argued that political decisions should be taken at the Council meeting and therefore abstained from voting along with Ireland and Denmark.

Decisions in the SVC need a qualified majority (62 votes) in order to be carried out. The proposal did not receive enough votes. Portugal, Austria, Luxembourg, Italy, France, Spain, Greece and Germany voted yes resulting in a total of fifty-four votes. Britain, Sweden, Finland and Belgium opposed the proposal, which resulted in twenty-two votes. The Netherlands, Ireland and Denmark abstained. Since the proposal was not approved, it automatically went to the Council of Agriculture.

Many representatives had reservations regarding certain provisions in the proposal, as already stated, but they were under political pressure to support it. The scientific evidence was put on the sideline since many governments were facing a hostile media and a fearful public in their fight against BSE. They agreed that there was no scientific evidence supporting a ban on fishmeal, but agreed to the proposal on political grounds.

Failure to deal with BSE on the national and EU level could have undermined the trust consumers had had in the institutions dealing with the crisis. Trust is partly built upon legitimacy, reliability, credibility and confidence (Booth, 2000). The new cases of BSE discovered, in spite of the reassurances made by the Commission that beef was safe, only served to undermine the legitimacy and reliability of the member states and the Commission in the eyes of the consumer. 'The credibility of the decision-makers and the institutions is linked to the fit between what is said by representatives of the organization and how the organization performs in the receivers' eyes' (Booth, 2000:198–199).

The status and credibility of the Commission, in terms of being responsible for the CAP and handling crises, is crucial for a functioning internal market. The EU has emphasized that production and supply of safe food must be one of the EU's top policy priorities. "Trust is a measure of the degree to which people are willing to put their faith in the organization in the future rather than in the present" (Booth, 2000:198–199). If the EU does not properly handle the BSE crisis, it will lose the trust of the consumers and this jeopardizes the internal market since the member states can take unilateral actions to protect their consumers.

In a letter given to EU Ministers responsible for agriculture (after the SVC meeting), the Icelandic Fisheries Minister cited the SSC in backing the Icelandic position and emphasized that EU experts did not find any scientific evidence linking fishmeal as a BSE carrier (Icelandic Ministry of Fisheries, 1 December 2000). This supports Grönvall's argument that 'expert knowledge and technocratic practices have become key political resources...' (Grönvall, 2000:27). Thus, the arguments presented by the Icelandic government were to a large extent based on the conclusions from EU experts.

Icelandic expert knowledge was not used to support the scientific arguments against the fishmeal ban. They were only used to certify that Iceland had complied with EU regulations. The Icelandic Minister of Fisheries attached a certification from the Chief Veterinary Officer to his letter to the EU Ministers stating that 'offal and waste from farms, slaughterhouses and meat processing plants will never enter and be processed in the specialized fishmeal processing plants' (Chief Veterinary Officer, 2000). The Icelandic Directorate of Fisheries also confirmed in a document sent with the letter that animals or parts of animals have not been used in the production of fishmeal.



### 5.3 VALUE CONFLICT

The BSE crisis has had a substantial effect on the agricultural sector in the EU member states, but so far the fishing industry has not been affected. The fishing industry is of relatively little importance in overall economic terms in the EU (Hauksson, 2002). If the interests of these two industries would clash, the Icelandic administration has argued that the interests of the agricultural sector would prevail (Icelandic Embassy in Brussels, October – December 2000).

The BSE crisis can be described as a multi-layered crisis. Its consequences have not been restricted to a single issue. It has touched consumers as well as the agricultural sector. When the Commission proposed the fishmeal ban, it did so to protect consumers from a fatal disease. All of the actors involved in the BSE crisis agreed to the seriousness of it, but differed in opinion on the appropriate measures in the crisis management. The member states and the Commission had to choose between allowing fishmeal in animal feed or accepting the risk of cross-contamination. The EU decision makers were faced with a trade-off regarding their decision on fishmeal in animal feed. Should scientific arguments be the basis of their decision or should other factors be taken into consideration (i.e., the blending of fishmeal with bone and meat meal and the effects that such cross-contamination could have on consumers' health)? The experts of the member states were faced with value-complexity, that is 'the presence of multiple, competing values and interests that are imbedded in a single issue' (George, 1980: 26). It was stated that the fishmeal ban was not the main concern for the Commission since it did not mention it in the press release regarding the actions taken to prevent the spread of BSE (Respondent C, 2001 personal interview).

The situations were quite different in Iceland and the EU during the BSE crisis. Meat and bone meal had been prohibited in ruminant feed already back in 1978 in Iceland and no cases of BSE have ever been found in the country. Iceland has very strict rules concerning the import of agricultural products, and until 1995 this was strictly prohibited. But as a member of the World Trade Organization (WTO), Iceland is obligated to allow agricultural imports to a certain extent. According to the WTO agreement, each state can implement measures related to animal and plant health, and food safety. Member states can set their own standards but they should be based on scientific evidence. Iceland's interpretation of these rules is the most stringent among the WTO member states (Icelandic Ministry of Agriculture, 31 January 2001). In general, agricultural imports are prohibited but the Icelandic Minister of Agriculture can permit imports if the Chief Veterinary Officer confirms that the imported goods do not carry contagious agents that can cause diseases. This is contrary to the general practices in other states where the majority of agricultural imports are allowed with a few exceptions (Icelandic Ministry of Agriculture, 31 January 2001).

Iceland had not been affected by the BSE crisis until the Commission proposed the fishmeal ban. When the Icelandic decision makers were confronted with the proposal from the Commission, they concentrated their actions on excluding the fishmeal ban from the proposal and left aside other issues in the actions proposed since they did not affect Icelandic interests.

Since the Icelandic response was characterized by a great deal of solitary, the question of group-think arises. Group-think refers to the tendency of tightly cohesive groups to fall prey to a specific form of 'collective foolishness' whereby the preservation of group harmony and amiability between group members overrides the group's ability to critically assess decision

problems, process strategic information, and intelligently choose a course of action ('t Hart, Rosenthal and Kouzmin, 1993).

Group-think was not clearly evident in this case. Rather, it looked like the participants converged on a particular approach, and then it can be said that the crisis was characterized by a solidarity response. This happens when an entire community faces a common outside threat (Rosenthal, Hart and Charles, 1989).

From Iceland's narrow interest in the crisis, there was no question about which decision to make concerning the fishmeal ban. When Icelandic policy makers are confronted with a crisis that concerns the fishing industry, they are not faced with value-complexity concerning external trade relations. One of the top priorities of the Icelandic Foreign Service is safeguarding the interests of the fishing industry abroad. As an Icelandic official said, 'People only need to know how to read statistics to see where the priority listing of the Foreign Service lies ... Blood is thicker than water' (Respondent R, 2001 personal interview). Furthermore, Iceland has only opened up its borders to external trade in return for getting increased market access for its fish products. The cod wars demonstrated the importance of fish for the Icelandic economy. Iceland cannot afford to lose any 'fish battles'.

The effort of the Icelandic government to safeguard the interests of the fishmeal industry is related to the importance of keeping the image of fish products as healthy and safe for consumption. The PM distributed at the SVC meeting stated: 'Fishmeal and fish oils exported from Iceland and Norway are not recycled products, but a safe source of protein harvested directly from nature' (Joint PM, 30 November 2000). The inclusion of fishmeal in the measures against BSE could have also had a dangerous spill-over effect on other fish products, as consumers might have gotten the impression that fishmeal carried BSE.

## 5.4 INFORMATION AND COMMUNICATION

### *5.4.1 Warning signs in France and Germany*

The Icelandic administration received the information late about the proposed bans in France and Germany. The first information came from the Icelandic Association of Fishmeal Manufacturers, which had received it from the International Fishmeal & Oil Manufacturers' Association (IFOMA). The Icelandic Embassies in Paris and Berlin did not pick up the warning signs. The original information concerning the French action was unclear and the information about the German position turned out to be incorrect. Nevertheless, the information triggered a response in the Icelandic administration. The Embassies were instructed to check whether the information was correct and to gather information about measures adopted for dealing with the BSE crisis in France and Germany. The process of information seeking took considerable time and crucial time was lost to lobbying the German government. The Icelandic administration did not know about the ban in France until the day after it was implemented and thus too late for lobbying.

The Icelandic Association of Fishmeal Manufacturers, via IFOMA, picked up indirect warning signs in the French media on November 13; the media never directly stated whether fishmeal would be included in the ban. The Association worried that France and other EU actors would include fishmeal in bans on using bone and meat meal in animal feed because of the discussions about blending fishmeal with meat and bone meal (IFOMA, 16 November 2000).

The Icelandic Ministry of Fisheries did not react to the first warning sign from the Chairman of the Association. It only reacted when the Chairman informed the Ministry that a shipment of fishmeal from Denmark to France had been stopped by the French authorities and when the Icelandic Feed, Seed and Fertilizer Inspectorate informed the Ministry that France had banned fishmeal in animal feed on November 15. Furthermore, the Icelandic administration did not immediately react to the letter from the IFOMA, which the Icelandic Association of Fishmeal Manufacturers sent to the Ministry of Fisheries on November 16, 2000. The Ministry of Fisheries forwarded the letter to the Ministry for Foreign Affairs and to the Fisheries Counselor in Brussels the day after. The letter laid out the strategy of IFOMA on how to prevent the spread of similar restrictions to the other EU states and how to challenge the French regulation on the basis on scientific data. The French regulation banning fishmeal in animal feed was attached to the letter. The letter stated that IFOMA was deeply worried that the French ban might influence the other EU member states, even though it did not appear as if Spain, Italy, Germany, Britain, Denmark and Ireland were moving towards introducing similar legislation. IFOMA urged all their members to respond immediately and to lobby their governments against an adoption of the French regulation.

The Icelandic administration did not seem to take seriously the possibility of an extended crisis since it had not established any mechanisms for investigating the ongoing debates in other member states and the Commission. Its main focus was on protesting the French action. It did not adopt the strategy of IFOMA 'to maintain a strong and well-organized network of information in order to ensure that the French position does not spread to other European countries' (IFOMA, 16 November 2000).

In the German case, the Icelandic Association of Fishmeal Manufacturers informed officials from the Ministry of Fisheries and the Ministry for Foreign Affairs about a possible crisis on November 27 at a common meeting in the Ministry of Fisheries. The information provided was not correct as it stated that a fishmeal ban in animal feed had taken affect. The Foreign Ministry requested the Embassy in Berlin to look into the case. The Embassy confirmed, on November 29, that the German government had proposed a bill in Parliament, which included a fishmeal ban. However, significant time had been lost since the Bundestag was to vote on the bill the following day.

The lack of information from the Icelandic Embassies in Paris and Berlin was noticeable. They probably underestimated the public's demands for action and the pressure this put on the politicians to respond. The Icelandic Embassies and the decision makers in the Icelandic Ministries did not worry that the French and German governments were proposing such a drastic measure as banning fishmeal in animal feed.

#### *5.4.2 Warning signs within the Commission*

The Commission's action came as a big surprise for the Icelandic administration. The Commission had not notified the Icelandic administration about the forthcoming proposal and it had not picked up the warning signs from the Commission. For instance, on November 27 the Commissioner for Health and Consumer Protection, David Byrne, demanded in a press release that Germany and Spain adopted stricter measures to tackle the BSE crisis. He stated that particular attention needed to be given to the removal of specific risk materials from animal and human food. At the Agricultural Council meeting on December 4, he called for

maximum control to protect consumers. He stressed that if the member states felt that the controls concerning feeding meat and bone meal to cattle were not fully respected then 'precautionary measures are urgently needed. ... We may have to take significant EU-wide health protection measures to ensure that consumers are not put at risk' (European Commission, 27 November 2000a).

Furthermore, the report by the Scientific Steering Committee (SSC) on November 27–28 stated that if risk assessments indicated that cross-contamination takes place in the member states 'a temporary total feed ban applicable to all farmed animals (including cattle, pigs, poultry, farmed fish and to pets), as proposed by several member states, would be the most effective approach to prevent the propagation of the disease' (European Commission, 27–28 November 2000). The Commission's proposal was built upon this report, but the Icelandic policy-makers also used it as proof that fishmeal did not carry BSE.

On the other hand, notes from the SCAN meeting on November 20–21 indicate that the Icelandic Feed, Seed and Fertilizer Inspectorate, Gudmundsson, was concerned that the French regulations would extend to the EU level and that Iceland would also have to implement them. He wrote in his meeting notes that it was vital for Iceland to inform all relevant bodies about the health of fishmeal and that there was no connection between fishmeal and BSE in animals. Gudmundsson also calls for a meeting with officials from the Ministry of Fisheries and Ministry of Agriculture to discuss these matters immediately after he returns home. 'There are high interests at stake for agriculture in Iceland. This is because most of the protein in Icelandic feed comes from fishmeal, and fat from slaughterhouses are used in pig feed' (Gudmundsson, 20–21 November 2000). The inspectorate's main concern seemed to be a possible ban on manufactured feed for animals in Iceland. However, he did raise the issue of a possible fishmeal ban, but there was no reaction from the administration. A factor in explaining this might be that it later emerged that Iceland would not have to implement the EU regulations on animal feed.

The failure of the Foreign Service to pick up the warning signs in Germany led to the belief that the fishmeal case was limited to France. The Icelandic administration was not at all aware that the German and French governments were trying to get the Commission to ban fishmeal in animal feed. France, holding the Council Presidency, had a particularly strong position in lobbying the Commission. The Icelandic administration seems not to have thought about that possibility. The Embassies in Brussels, Paris and Berlin were not looking for signs of a possible crisis.

There had been many red flags: France's ban, the SSC report, and the fact that the Commission had discussed a possible ban on fishmeal in animal feed two years earlier. In January 1999 the SVC (including Icelandic representatives) concluded that there were no health reasons to ban fishmeal in animal feed since it did not spread BSE. The Icelandic administration clearly ignored the possibility that such a discussion could come up again in the Commission after the French ban.

#### *5.4.3 The flow of information about the Commission's proposal*

The Icelandic administration received information about the Commission's proposal only a day before the decision was to be reached at the SVC meeting. The Ministry of Fisheries received information about the proposal from the Fisheries Counselor at the Icelandic Embassy



in Brussels on November 29. The Fisheries Counselor had received it through informal channels, not formally from the Commission (Snorri Runar Palmason, 21 July 2001 personal interview). The Ministry forwarded the information to the External Trade Department at the Ministry for Foreign Affairs. Later, the Chairman of the Icelandic Association of Fishmeal Manufacturers called the Ministry of Fisheries and argued that the proposal had been accepted by the Commission.

However, the Minister for Foreign Affairs, Asgrimsson, did not receive the information from his Ministry. He received the information from a fishmeal producer on the east coast of Iceland who phoned him at home in the evening. This most likely can be explained by the fact that the Minister for Foreign Affairs had formerly been the Minister of Fisheries and had close connection to the fishing industry. Asgrimsson immediately consulted the Permanent Secretary of State and they decided to call a meeting with all of the EU ambassadors in Iceland the following day. The Ministry for Foreign Affairs probably formally received the information in the afternoon on November 29, which explains why the Minister was not informed about the case.

There was clearly a lack of communication between the Ministry and the Minister. The Minister clearly felt the matter was serious enough, and within minutes he and the Permanent Secretary of State decided the first steps in the crisis management. This lack of communication was not decisive but it delayed the consultation process within the administration about how to respond to the crisis.

The question arises whether Iceland was entitled to receive information regarding the Commission's proposal before it had been submitted to the SVC. According to the EEA Agreement, EFTA/EEA experts should be consulted when the Commission is drafting a proposal so the EFTA countries have the opportunity to comment on the draft and the Commission should then forward these comments to the member states and the Council (Icelandic Ministry for Foreign Affairs, 2000). As has been discussed earlier, the EEA Agreement does not cover the CAP and Iceland is excluded from a large part of the provisions regarding animal health. Therefore, it is questionable if Iceland should have been informed of the measures under review by the Commission. On the other hand, in the EEA Agreement there is a safeguard clause that states 'If the EC Commission intends to take a decision on protective measures concerning part of the territory of the Community, it shall inform the EFTA Surveillance Authority and the EFTA States without delay' (European Free Trade Association, 2001a: Chapter I of Appendix I, point 3). However, the Commission did not inform EFTA or ESA of the proposal before it had been submitted to the SVC.

The Commission's proposal focused on taking precautionary measures in the agricultural sector. It is stated in a report from the Icelandic Embassy in Brussels that in the preparatory stages, it seems that the Commission had forgotten to inform the relevant parties within the Commission: for instance, the Fisheries Department (Icelandic Embassy in Brussels, October – December 2000). Usually a proposal takes a long time to go through the EU institutions and during that time member states and the Commission gather information regarding the proposal. In this case, the usual procedure for a draft proposal was changed. The Commission stated in its proposal that the adopted measures were an exceptional response to exceptional events. Thus, the proposal did not go through the traditional decision-making process within the Commission. The French and the German governments influenced the Commission's decision and it seems like the other member states were not widely consulted.



#### 5.4.4 *The initial reaction to the crisis: The Ambassadors' meeting*

An unusual step was to call all of the EU Ambassadors in Iceland to a common meeting in the Ministry for Foreign Affairs on November 30. As an official said, 'It was a strong message to gather all the Ambassadors to the Ministry for Foreign Affairs' (Respondent C, 2001 personal interview) to inform them of Iceland's concerns regarding the crisis. Present were Ambassadors from Denmark, France, Germany and Finland, the Deputy Head of the British Delegation, the EU ambassador to Iceland and Norway, four representatives from the Icelandic Association of Fishmeal Manufacturers, three officials from the Ministry of Fisheries and four officials from the Foreign Ministry. The Permanent Secretary of State in the Ministry chaired the meeting.

The Ambassadors were given information about the importance of fishmeal and fish oil for the Icelandic economy. The Permanent Secretary of State informed them that the Icelandic representatives abroad had gathered information regarding the fishmeal ban from the EU member states. They had been informed that the governments of the member states were fully aware of the fact that there was no connection between fishmeal and BSE. The information collected indicated that the reason for the ban was fourfold: 1) the difficulty in distinguishing fishmeal from other kinds of meal, 2) the risk of cross-contamination when the same vehicles were used, 3) the mixing of fishmeal and meat meal and 4) finally, the meat and bone meal ban would increase the demand for fishmeal which could cause excessive fishing.

The EU Ambassador, Gerhard Sabathil, said that the ban was an emergency measure taken to ease public fears and restore faith in the beef market. He also pointed out the difference between the German ban and the EU proposal. The German ban had no time limit but the EU ban would only last for six months. Furthermore, banning fishmeal and fish oil in animal feed was not the EU's main concern; in fact, the Commission did not even mention it in its press release. Sabathil also emphasized the difficulty of the BSE crisis for the EU and asked for understanding from Iceland.

The Danish Ambassador said that Denmark fully understood the Icelandic position on the matter, and that he thought that Denmark should try to convince the EU to exclude fishmeal and fish oil. He said that he did not know the current position of the Danish politicians, but he was optimistic that they would be sympathetic to the Icelandic position.

The Icelandic Ministry for Foreign Affairs had never before called Ambassadors from so many countries to a common meeting (Respondent P, 2001 personal interview). The decision to call the meeting clearly indicated the importance of the issue for Iceland. The EU Ambassador to Norway and Iceland, located in Oslo, was in Iceland for the first time and received a very intensive course in what was important in Iceland (Respondent A, 2001 personal interview). It was just a coincidence that he was in Iceland when the crisis came up and it is not certain that the Icelandic government would have contacted him otherwise (Respondent C, 2001 personal interview). He contacted a number of high ranking officials in the Commission and informed them of the effects the fishmeal ban would have on the fishmeal industry in Iceland: the Director of Consumer Affairs in the Directorate-General for Health and Consumer Protection (DG SANCO) (Agne Pantelour), an expert in DG SANCO (Joachim Kreysa), and Maja Kirchner in the Cabinet of Franz Fischler Commissioner for Agriculture and Fisheries. Later that day, the EU Ambassador had a number of meetings with Icelandic officials that had been planned before the crisis had occurred. He used the oppor-

tunity to provide Icelandic officials with information concerning the fishmeal ban, which he had gathered from conversations with officials in Brussels.

#### *5.4.5 The daily routine altered: Informal processes and improvisation*

At the same time the Ambassadors' meeting took place, the Icelandic Ambassadors in Sweden, France, Germany, Denmark, Finland, Britain and Belgium were distributing information about Icelandic concerns. The Permanent Representations of EU member states in Brussels were also informed of Iceland's position. The Permanent Secretary of State also directed the Icelandic Ambassadors in the EU member states to arrange meetings with Ministers and high ranking officials. In order to be able to deliver information to the highest-ranking officials and politicians, it was decided to send the Icelandic Ambassadors in person. The Ambassadors were also asked to gather information from the member states on their positions regarding the Commission's proposal. The Icelandic Ambassadors in Britain, Sweden, Finland and Denmark met high ranking officials. The Icelandic Ambassador in Germany spoke with the German Minister of Health and met with the German Federal Minister for Food, Agriculture and Forestry. He also contacted German MPs and officials and met the Chairman of the German Agricultural Association. Officials in the Icelandic Embassy in France had already met officials within the French administration.

This pattern does not fit in with the daily routine of the Icelandic Foreign Service; that is, promoting Icelandic economic interests at so many different levels in the member states and the Commission in such a limited time. This is in line with other findings regarding crisis management that 'formal rules and procedures give way to informal processes and improvisation' (Rosenthal, 't Hart and Charles, 1989).

#### *5.4.6 Informal lobbying and symbolic actions*

The Minister for Foreign Affairs used what can be characterized as informal information processing as he personally phoned the Fishery Ministers in Denmark and two other EU countries to inform them of the Icelandic position. He also spoke to a person within the Directorate for Health and Consumer Protection within the Commission.

The Minister of Fisheries utilized a more formal approach when he sent a letter, including several documents about the Icelandic position, to all of the EU Agricultural Ministers. This action was done in close cooperation with the Ministry for Foreign Affairs.

The Icelandic decision-makers used a symbolic action to emphasize the political importance of the case for Iceland when the Icelandic Ambassador in Brussels was sent to the SVC meeting on November 30. The Permanent Secretary of State thought of sending the Chief Veterinary Officer to the meeting but he was not available, so the Ambassador was instructed to attend the meeting. The Ambassador had never attended a SVC meeting before, so it can be said that 'necessity is the mother of invention' (Rosenthal, 't Hart and Charles, 1989).

Furthermore, the Icelandic Ambassador in Brussels attended a Schengen meeting with EU and EFTA/EEA Ambassadors on December 1. The Icelandic Ambassador used the opportunity to inform the French, Spanish and the British Ambassadors of the Icelandic position. 'The Spanish Ambassador agreed with me, but the fishmeal focus had bypassed him' (Gunnar Snorri Gunnarsson, 6 September 2001 personal interview). Norway chaired the

Council Presidency and invited the Ambassadors to lunch. The Icelandic Ambassador in Brussels said, 'I was seated next to the French Ambassador and used the opportunity to talk about fishmeal the whole time' (Gunnar Snorri Gunnarsson, 6 September 2001 personal interview).

On the day of the Agricultural Council meeting (December 4), the Icelandic Ambassador in Brussels decided to send officials to the Council building as a form of symbolic action stressing the political importance of the matter for Iceland. The Ambassador also wanted to gather information in the hallway while the Agricultural Council was meeting to discuss the fishmeal ban. The Council building is officially closed for non-EU member states. However, Iceland being a Schengen member has access to the building. During the Council meeting the Icelandic diplomats were informed that Iceland's concerns were being heard and that Iceland's diplomatic relations had been utilized positively (Respondent R, 2001 personal interview).

#### *5.4.7 The advantages of new technology for a small administration*

The Permanent Secretary of State linked up all of the Icelandic Embassies in the EU member states to the Ministry's data and communications system (Respondent A, 2001 personal interview). This new technology saved time and made it possible for the small administration to cope with the crisis: that is, to activate its personnel and to respond in a relatively short amount of time. Since the Embassies were located in different countries, the volume and speed of information increased and time consuming procedures were set aside; this supports the observations made in crisis management literature (Rosenthal, 't Hart and Charles, 1989:18). The experience of Icelandic officials with the data and communications system was only positive and it did not result in information overload despite the fact that formal procedures were set aside.

#### *5.4.8 Attempts to use the media*

The media coverage in Iceland was substantial but it had little or no effect on the decision makers. The news coverage informed the public that the Foreign Service and the Minister of Fisheries were doing everything within their power to influence the decision makers at the EU level. The extensive news coverage is another strong indication of the seriousness of the case for Iceland.

The Ministry for Foreign Affairs made an attempt to influence the decision makers in the EU member states and the Commission through the media. It sent a press release to newspapers specializing in European matters. According to the officials working on the case, this was the first time that the Ministry had ever sent a press release to foreign newspapers, which again highlights the importance of the case (Respondent A, 2001 personal interview). But this effort failed completely. 'The effect of the press release was limited since these newspapers get stacks of press releases, and the Ministry for Foreign Affairs had had very little direct contact with the journalists of these newspapers' (Respondent A, 2001 personal interview).

## 5.5 MULTILATERALIZATION

One of Iceland's main objectives with the EEA Agreement has been to secure Icelandic economic interests in the EU without becoming a full member of the CFP and the CAP. The majority of Icelandic politicians believe that these two policy areas work against Icelandic interests, and they commonly argue that the EEA Agreement gives Iceland 'everything for nothing.' In fact, the institutions of the EEA did not directly assist Iceland in getting the Commission and the EU member states to change their position on fishmeal. Nevertheless, the institutional framework of the EEA Agreement was of great value for Iceland since it gave Icelandic representatives access to the SVC. Traditional diplomatic relations significantly helped the Icelandic policy makers in their attempts to influence EU decision makers.

According to the EEA Agreement, the EEA/EFTA states, on the one hand, and the Commission and EU member states, on the other, decide whether EU regulations and directives should be incorporated into the EEA Agreement within the EEA Joint Committee. In addition to other measures taken, the Icelandic administration considered calling an extraordinary EEA Joint Committee meeting, but eventually decided not to do so. There are several interrelated reasons why Iceland did not request a meeting:

- Representatives from the EU member states, except for the state chairing the Council Presidency, do not usually attend such meetings.
- High ranking officials from the Commission do not attend the meetings.
- The meetings are not attended by representatives from the Directorate-Generals.
- There was no time to call such a meeting.
- It is difficult to find a solution within the Committee if the issue is politically sensitive.
- The committee is more of an information channel between the EU pillar and the EFTA pillar of the EEA agreement (Gunnar Snorri Gunnarsson, 6 September 2001, personal interview).
- There was also a possibility that Iceland would be told that the fishmeal ban did not concern the EEA Agreement, since Iceland is excluded from a large part of the provisions regarding animal health (The European Free Trade Association, 2001a: Appendix 1; Respondent A, 2001 personal interview). Thus, Iceland could have had more difficulty lobbying within the Commission using the EEA channels.

However according to the Icelandic Ambassador in Brussels, he informed the Commission that if fishmeal would be banned at the Agricultural Council meeting, the Commission should be prepared to attend an EEA Joint Committee meeting. There has only once been one extra EEA Joint Committee meeting and that issue concerned Norway.

Nor did the Icelandic decision makers request a meeting in the EEA Council where the EEA/EFTA and EU foreign ministers meet. The main reason was the limited time available and the fact that the EU Ministers rarely attend such meetings. Thus, an EEA Council meeting was never really considered an option.

Iceland did however use the EEA decision-making channels within the Commission to express its views. As an associated member through the EEA Agreement, Iceland could use its access to the SVC to make the experts of the EU member states aware of its position. However, this was only possible because of the SVC Chairman's liberal interpretation of Appendix 1 in the EEA Agreement, which exempts Iceland from implementing animal health regula-



tions. Iceland is in a difficult position within the EEA because if Iceland complains that the Commission does not follow the formal rules of the EEA Agreement, the Commission can question the attendance of Icelandic representatives at SVC meetings when fish and fish products are not on the agenda (Respondent R, 2001 personal interview). 'In the SVC meetings, in general, it is our experience that if they [the Commission] know that a case concerns our basic national interests and we have something to say, then the Chairman has allowed us to speak' (Respondent A, 2001 personal interview). Strict interpretation of the EEA Agreement might not be advantageous for Iceland when the subject is in the grey zone; that is, Iceland attending the SVC meetings dealing with agricultural matters (Respondent A, 2001 personal interview).

Icelandic policy makers also emphasized traditional diplomatic lobbying in the EU member states. Icelandic Embassies were instructed to conduct an intensive lobbying campaign at the highest level in the member states. The intention was to get the EU members to reject the Commission's proposal at the SVC meeting and later at the Council meeting. Iceland made a specific attempt to influence the Nordic states: in particular Denmark where the fishmeal industry provides 1500 jobs, and Sweden which was about to take over the Council Presidency (Morgunbladid, 3 December 2000). For instance, immediately after discovering the France ban, the Iceland administration informed the administrations of Denmark and Sweden about its position. The Icelandic Ambassador in Sweden sent the Swedish Minister of Agriculture, Margareta Winberg, the Icelandic PM and a letter written by the Icelandic Foreign Ministry and Icelandic Fisheries Ministry. France and Norway were the only other states that were informed at that time about Iceland's position. Furthermore, the Icelandic Minister for Foreign Affairs called the Danish Minister for Food, Agriculture and Fisheries, Ritt Bjerregaard, on November 30, in order to tie Icelandic interests with those of Denmark. He also called the Ministers responsible for agriculture and fisheries in two other EU countries. He made another phone call to the Danish Minister on the day of the Council meeting.

The limited access Iceland has to EU decision making makes it even more important for the administration to tie Icelandic interests to those of other member states (Respondent R, 2001 personal interview). This is indicated by Iceland's attempt to get the Nordic states and other EU states to support its stand. In addition, policy makers in Iceland have a long history of close cooperation with the Nordic states and have worked closely with them on EU issues in order to secure other common interests (such as, to guarantee the Nordic Passport Union by the Schengen Agreement). However, the Nordic states do not automatically advocate Icelandic interests within the Union. Icelandic policy makers feel the need to draw parallels between their interests in order to get support. In the Council meeting on December 4, the Danish Minister for Food, Agriculture and Fisheries advocated the exclusion of fishmeal in the decision (Morgunbladid, 5 December 2000). The Icelandic Government thanked her for the outcome of the Agricultural Council meeting (Morgunbladid, 5 December 2000). Ritt Bjerregaard thanked Jean Galavany, the French Minister for Agriculture and Fisheries, for his role as president in finding a compromise that the member states could all agree upon.

The Icelandic policy makers' choice of information channels may indicate their limited belief in the formal EEA institutions to solve a crisis like this. Traditional diplomatic relations were strongly emphasized and the EEA Agreement indirectly helped the Icelandic administration in its crisis management. Icelandic officials could use the diplomatic relations they have acquired through the EEA Agreement and its attendance at the SVC meeting was important in influencing the decision makers (Icelandic Embassy in Brussels, October – De-



ember 2000). Furthermore, Iceland's membership in Schengen made it possible for Icelandic officials to enter the Council building. The Icelandic policy makers used informal groups and settings to influence EU decisions, and the formal (e.g., the EEA institutions) ones were primarily important for symbolic reasons. Iceland's membership in the EEA and Schengen provided legitimacy for the Icelandic policy makers when adopting policies and actions of an informal nature in order to influence the main EU decision makers.

In one of Iceland's biggest newspapers, the Minister for Foreign Affairs expressed his opinion that the fishmeal ban was a violation of the WTO rules and the EEA rules on the free flow of goods (Morgunbladid, 1 December 2000). If the fishmeal ban would have actually materialized, the Icelandic administration probably would have used the WTO rules to support its case, as was considered a possibility in the aftermath of the crisis. Also, a discussion took place about the possibility of taking the EU to the European Court of Justice in the event of a fishmeal ban. Thus, European and international trade laws might have been used to support Iceland's stand against its overwhelming opponents in the EU.

## 5.6 LEARNING

This section focuses on post-crisis learning, including lessons learned from the crisis, implementing necessary changes, and transferring knowledge in order to deal with future crises (Newlove, Stern and Svedin, 2000). There are several points that can be considered in relation to this. The discussion is split into six considerations: the ability to influence the EU using the EEA Agreement, Iceland's limited access to the SVC, obstacles for attending Commission meetings, the number of Icelandic Embassies in the EU member states, utilizing the media and use of technology.

### *5.6.1 The ability to influence the EU using the EEA Agreement*

Iceland needs to reconsider the structure of the EEA Agreement in order to enhance its ability to influence EU decisions. The fishmeal ban debate symbolized the position Iceland has in relation to the EU institutions and its status under the EEA Agreement. Despite formal access to the Commission, Iceland had greater difficulties in influencing the Commission than the other EU member states. The EEA Agreement does not allow Iceland to directly influence the Commission expert during the consultation process between the EFTA/EEA countries on the one hand and the Commission on the other. Also, the observer status of the EFTA/EEA states in the Committees enables Iceland to have its views heard. This limited access reduces the information flow from the Commission to the Icelandic administration and diminishes Iceland's opportunity to influence the Commission.

As one respondent put it "if Iceland had been sitting in the Commission, the proposal as such would not have been made. The arguments that we had made during the later stages could have been brought up much earlier" (Respondent C, 2001 personal interview). Another respondent argued that the Commission would not have submitted a proposal that would have hurt national interests of a member state as badly as the fishmeal ban would have in Iceland. There are unwritten rules within the EU that prevent decisions being taken that hurt vital national interests (Respondent A, 2001 personal interview). The report by the Icelandic Embassy in Brussels argued that it is useful for countries outside the EU to have access to the

experts of the Commission but it is not the same as having someone inside the Commission. The report continues:

It is no coincidence that the member states, and not the least – the larger ones, place their own people within the Commission. That is done in order to keep close ties with their own administrations as a way of safeguarding their own interests and of strengthening their own informal information gathering (Icelandic Embassy in Brussels, October – December 2000).

Also, the EFTA/EEA states do not have the right to attend Council meetings and they do not have the right to information distributed within the Council. All information within the Council coming from the Commission or the member states is not available to outsiders. In this case, this limited the possibility of Iceland influencing the decision makers. However, EFTA officials working on EU issues often get inside information from officials from the Nordic EU member states and they even sometimes are able to convince them to copy the documents which are being distributed within the Council for them (Thorhallsson, 2001).

The EFTA/EEA states need greater access to the Council. The absence of Iceland in the Council forces Iceland to rely on EU member states and the Commission to defend Icelandic interests within the EU decision-making process. Iceland does not have a bargaining position in the Council because of its absence. This is also the case within the SVC since Iceland does not have the right to vote with its observer status.

A particular problem arises when Iceland cannot attach its interests to the interests of at least one member state. Iceland succeeded in tying its interests to Denmark, and some other member states, but early in the crisis it was uncertain whether Denmark would let agricultural interests prevail over its fishmeal interests. This was demonstrated by the fact that Denmark decided to abstain from voting at the SVC meeting on November 30.

Furthermore, the European Parliament is becoming increasingly more powerful within the EU. For instance, the Parliament has issued several opinions on how to handle the BSE crisis. Iceland does not have access to the Parliament through the EEA Agreement nor to the consultation process between it and the Commission.

Iceland does not have the same access to the European Court of Justice, either, as the EU member states. States outside the EU have great difficulties in getting the Court to consider their cases while member states can challenge EU decisions in the Court. This would have been the case concerning the fishmeal ban even though it is very likely the proposed ban went directly against EU's principal of proportionality. The only possibility Iceland would have had to bring its case to the Court would have been to ask a member state to bring the case on its behalf to the Court. Iceland had a strong case, but it very unlikely that any of the member states would have been willing to take the case to the Court (Icelandic Embassy in Brussels, October – December 2000).

The Icelandic Minister for Foreign Affairs has, on several occasions, raised his concerns about Iceland's inability to influence decisions taken within the present decision-making structure of the EEA Agreement. He has demanded 'technical changes' to the EEA Agreement in order give the EFTA/EEA states a greater role in the decision-making process. This possibility has been discussed with the member states and the Commission, but they have declined to make any changes to the Agreement. On the other hand, the Prime Minister of Iceland, David Oddsson, argues that the function of the EEA Agreement fulfils Icelandic interests. Instead, he worries that changes to the Agreement might drag Iceland closer into European integration and open up the possibility of EU membership which he strongly opposes.

### *5.6.2 Iceland's limited access to the SVC*

The exception that Iceland has concerning animal health in the EEA Agreement restricts its access to the SVC. If not for the liberal interpretation of the SVC's Chairman, Iceland could not have spoken at the SVC meeting on November 30, as stated earlier. Furthermore, the Commission held preparatory meetings before the SVC that Iceland was not invited to since the fishmeal ban was defined as an animal health problem. The damaging effect of this restricted access to committees within the Commission was further evident in the aftermath of the crisis. In the report from the Icelandic Embassy in Brussels, it is proposed that changes to Appendix 1 of the EEA Agreement should be considered as an option to ensure access to the SVC (Icelandic Embassy in Brussels, October – December 2000). This in fact implies that Iceland should incorporate EU regulations and directives regarding animal health as Norway has already done.

### *5.6.3 Obstacles for attending Commission meetings*

Icelandic Ministries (in particular their institutions and surveillance authorities) lack the experts and finance to attend meetings within the Commission. Also, some Icelandic Ministries have not prioritized information gathering within the EEA framework or attempts to influence decisions within it. This is further demonstrated by the fishmeal case. Icelandic representatives only occupationally attend committee meetings within the Commission dealing with meal for animal feed. As a result, Iceland does not have any influence on the regulations, which are decided in these committees. Furthermore, Iceland has to implement them regardless of whether they suit the situation in Iceland or not. Norwegian representatives attend all meetings, as do all of the EU member states. The Commission takes into account their views and makes an attempt to reach an agreement (Gudmundsson 1999).

The Council of Ministers held a conference about the BSE crisis in July 1997. Iceland was not represented at the conference. The conference suggested several measures to tackle the BSE crisis and discussions took place about the possibility to ban all protein for ruminants including fishmeal. After the conference, the relevant committees within the Commission discussed this possibility from November 1997 to January 1999, as stated earlier. The absence of Iceland at the conference made it difficult for Icelandic representatives to get involved in the discussions within the Commission (Gudmundsson, November 1997).

Evidence also indicates that Iceland is not active in policy coordination in the consultation process of the EFTA/EEA states concerning animal feed. This is demonstrated in the minutes from an internal meeting in December 1997 within the EFTA about the relationship between the EFTA/EEA states and the EU concerning animal feed. At the meeting the Chairperson from EFTA stated that Iceland had not sent amendments to the proposed EU regulations concerning animal feed which were asked for in a letter in April that year. Amendments had been received from all other parties involved. The proposals implied severe changes to the existing regulations. The Icelandic Feed, Seed and Fertilizer Inspectorate concludes from this case that it is important that the Icelandic Ministry of Agriculture allocates the responsibility of certain sectors to individual officials so issues within them are dealt with properly and duplication is avoided (Gudmundsson, November 1997).

It is interesting to note that the relevant Ministries did not enhance the role of the Icelandic representatives within the Commission after the discussions on banning fishmeal. No

systematic measures were adopted to increase information gathering within the Commission or the member states about measures adopted to deal with the BSE crisis. No attempts were made to increase Iceland's influence in EU decisions concerning animal feed. No crisis prevention took place.

Two conclusions can be drawn from this. First, the Icelandic government needs, to a greater extent, to prioritize what sectors it wants to try to influence within the EEA. Second, the Icelandic administration needs more resources for information gathering within the EU institutions and the member states and for influencing the decisions taken within the EEA framework. Prioritization and greater resources are essential if Iceland wants to become proactive within the Commission in the country's most important sectors (such as the fishmeal sector). Today, the administration is reactive to the day-to-day decision making process of the EEA. Icelandic politicians need to change their priorities in order for that to change.

#### *5.6.4 Icelandic Embassies in the EU member states*

Iceland only has embassies in eight of the fifteen EU member states.<sup>9</sup> This limits the amount of information gathering for the Icelandic administration (Icelandic Embassy in Brussels, October – December 2000). Iceland, for instance, does not have embassies in Spain and Portugal, countries which have considerable interests in the fishing industry. Iceland has to anchor its interests to other member states in order to influence decision making within the EU. Iceland needs to consider opening embassies in these two countries if not only to open up the possibility of informal information gathering. In fact, Iceland needs to reconsider information gathering in all the EU member states and its attempt to influence domestic EU decision makers. This is crucial in order to prevent a similar crisis from happening again. More efficient information gathering in France and Germany would have given Iceland a better change of influencing their decisions and might have helped it to discover the Commission's proposal earlier. Also, Iceland needs to establish contacts in Central and South Europe. At present, Iceland does not have embassies in any of the new member states. This will make it more difficult for Iceland to influence EU decisions.

#### *5.6.5 Utilizing the media*

The media often plays an important part in crisis management. The media can form public opinion to which the decision makers respond, or the media can be used to influence the actions taken. The Icelandic Ministry for Foreign Affairs sent a press release to various newspapers in Europe for the first time but there was no follow-up from the journalists working on these newspapers. The lack of contact with the media prevented the Ministry from getting its case publicized. Thus, the media was of no use to the Icelandic government during the crisis. This shows the importance of improving and increasing ties with journalists writing about European matters. Now the Ministry is considering establishing contacts with journalists to follow Icelandic press releases and to inform them of Icelandic interests in a given matter. The media coverage in Iceland concerning the fishmeal crisis did not have an impact on the

<sup>9</sup> Iceland has embassies in Denmark, Sweden, Finland, Britain, Germany, France, Belgium and Austria. The embassy in Vienna was opened in May 2001 and serves OSCE and Austria.

Icelandic decision makers. The media used information from the decision makers and it did not bring forth any new information from the EU member states or the Commission.

### *5.6.6 Use of technology*

The use of latest technology proved to be successful in the fishmeal case, in particular the data and communications system created within the Icelandic Ministry for Foreign Affairs. The Lotus GoPro system allows the Ministry and its embassies to access simultaneously documents and correspondences from a database: e-mails, letters, internal reports, minutes and notes. The data and communications system was used to speed up the information process and unite the actors around a common goal.

## *6 Conclusions*

The proposal from the Commission to ban fishmeal demanded a swift response from the Icelandic administration. It was a threatening situation as a whole industry could have been ruined with multiple effects on the country's economy and livelihood. The Icelandic administration had less than one day to respond to the proposal. Since the proposal did not get a qualified majority at the SVC meeting, the Icelandic administration had one more working day to influence the EU member states and the Commission before a final decision was taken in the Agricultural Council. The Council decided to prohibit feeding processed animal protein to farmed animals which are kept, fattened or bred for the production of food. Fishmeal intended for feed for animals, other than ruminants, was granted an exception. Iceland was pleased with the Council's decision since only 4 percent of fishmeal export from Iceland was intended for ruminant feed.

The administration was not prepared for the fishmeal crisis despite the discussions that took place in the Commission from 1997 to 1999 about a possible fishmeal ban. Also, the administration did not pick up the warning signs coming from France, Germany and the Commission. The Icelandic Association of Fishmeal Manufacturers was on the alert and had picked up some signs. However, the administration did not keep their eyes open for a possible crisis within the Commission after the France action. The administration was simply not expecting a crisis.

On the other hand, the expansion of the Foreign Service in the last four to five years and its increased expertise were of enormous help in dealing with the crisis. The experience of the main decision makers and officials involved in the wider network was of key importance in making Iceland pro-active in the fishmeal debate.

In the decision-making process Iceland did not have to face value complexity or any trade-offs as the crisis only touched the fishing industry and not the agricultural sector as in the EU member states. The Icelandic administration could concentrate their attention on fishmeal without considering the effect on the agricultural sector in Iceland, as agricultural imports are prohibited in Iceland and the agricultural sector has been not faced with a case of BSE.

As an associated member through the EEA Agreement, Iceland could access the SVC to inform the experts of the EU member states about Iceland's position. However, this was only possible because of the SVC Chairman's liberal interpretation of Appendix 1 in the EEA



Agreement. Iceland did not activate the formal EEA institutions as a way of pressing its views. Instead it was decided that traditional diplomatic relations should be used to gather information and influence the decision makers at the highest level in the member states.

However, if the fishmeal ban would have been agreed upon in the Agricultural Council, the Icelandic representatives told the Commission that it should be prepared to attend a joint EEA meeting, which was considered the last resort in the crisis management. The Icelandic Foreign Minister had also emphasized that a potential fishmeal ban was against WTO rules.

Decision making in Iceland took place at the highest level within the Ministry for Foreign Affairs. The crisis management was done in close cooperation with the Ministry of Fisheries and the Icelandic Association of Fishmeal Manufacturers. There was a steady flow of information between the actors in the wider network and they all felt that they were being consulted on the matters related to them. No conflicts were identified. The administration's size, informality, flexibility and trust contributed to coalition building within the administration.

The decision makers decided to emphasize scientific evidence in their attempts to challenge the proposed ban, instead of statistics about the importance of fishmeal for Iceland or the economic difficulties created by a ban. The key argument was that fishmeal does not carry BSE. The scientific evidence was a useful tool in lobbying the member states and in the bargaining that took place within the SVC. However, the scientific evidence was only a helpful strategy in practice because the Commission's main concern was mixing fishmeal with meat and bone meal.

On the other hand, Iceland succeeded in raising awareness in the EU states (such as in Denmark), which also have interests in the fishmeal industry. This helped to put the exclusion of fishmeal in animal feed high on the agenda at the SVC and Agricultural Council meetings. Icelandic policy makers were also able to tie their interests to the interests of some of the EU policy makers and this proved to be an important part of the crisis management. The strategy of the main decision makers was smart. They emphasized scientific evidence and demanded that the EU decision should be made based on scientific evidence. At the same time, they tried to build a coalition around economic interests in the EU. The coalition rejected the proposal because of its damaging effect on the fishmeal industry but also because it lacked scientific backing.

The media in Iceland did not play any significant role in the crisis management since it relied entirely on information from the decision makers in Iceland. The Ministry for Foreign Affairs tried to influence the decision makers in Brussels and the member states by sending press releases to various newspapers in Europe. However, due to the lack of media contacts in Europe, the Icelandic point of view did not get the attention hoped for by the Icelandic administration. This attempt completely failed.

Iceland received information concerning the fishmeal ban late and by coincidence through informal channels in Brussels and an Icelandic fishmeal producer. This is because the Commission did not inform the EFTA/EEA states and ESA of its intention to take precautionary measures. This is related to the fact that Iceland has an exception regarding the implementation of animal health regulation (Appendix 1) within the EEA agreement. Iceland's limited participation in the EU and the EEA decision-making process contributed to the scope of the crisis. As an outsider, Iceland has a limited chance of stopping the Commission from drawing up a proposal like this. Iceland cannot rely entirely on the Commission concerning information about its own interests. On the other hand, Iceland's access to the SVC within the Commission was of key importance in the fishmeal case. But Iceland's restricted

participation in the Commission and the Council and its limited bargaining position within the EEA forced the Icelandic decision makers to concentrate on traditional diplomatic channels within the EU member states.

## References

- Booth, S.A. (2000). 'How Can Organisations Prepare for Reputational Crisis?' *Journal of Contingencies and Crisis Management*. Oxford: Blackwell Publishers Ltd.
- Byrne, D. (2001). *The European Commissioner for Health and Consumer Protection: The Commission Policy on the Health Aspects of BSE – Address to COPA on February 9, 2001*. [http://europa.eu.int/comm/dgs/health\\_consumer/library/speeches/speech81\\_en.html](http://europa.eu.int/comm/dgs/health_consumer/library/speeches/speech81_en.html) (28 June 2001).
- Chief Veterinary Officer (1 December 2000) Letter to the Icelandic Minister of Fisheries.
- CIA (Central Intelligence Agency). 2001. *World Fact Book, 2000*. <http://www.odci.gov/cia/publications/factbook/index.html> (1 February 2001).
- EFTA (The European Free Trade Association). 2001a. *European Economic Area Agreement*. <http://secretariat.efta.int/Web/EuropeanEconomicArea/EEAAgreement/annexes/annex1.pdf> (4 April 2001).
- EFTA (The European Free Trade Association). 2001b. *How EFTA Works*. [http://secretariat.efta.int/efat/presentation/how\\_works/?1=1&print=true](http://secretariat.efta.int/efat/presentation/how_works/?1=1&print=true) (4 April 2001).
- European Commission. 15 November 2000a. *European Commission discussion on the current situation on BSE in the EU*. [http://europa.eu.int/rapid/start/cgi/guesten.ksh?p\\_action.gettxt=gt&doc=IP/00/1312101AGED&lg=EN&display](http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/00/1312101AGED&lg=EN&display) (28 February 2001).
- European Commission. 15 November 2000b. *Short report of the meeting (2000/30) held in Brussels on November 15, 2000*. [http://europa.eu.int/comm/food/fs/re/svc/rap38\\_en.html](http://europa.eu.int/comm/food/fs/re/svc/rap38_en.html) (9 September 2001).
- European Commission. 27 November 2000a. *David Byrne on BSE developments in Germany and Spain*. [http://europa.eu.int/comm/dgs/health\\_consumer/library/press/press88\\_en.html](http://europa.eu.int/comm/dgs/health_consumer/library/press/press88_en.html) (3 July 2001).
- European Commission. 27 November 2000b. *Statement of David Byrne on new BSE-cases in Germany and Spain*. [http://europa.eu.int/rapid/start/cgi/guesten.ksh?p\\_action.gettxt=gt&doc=IP/00/1359101AGED&lg=EN&display](http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/00/1359101AGED&lg=EN&display) (3 July 2001).
- European Commission. 27–28 November 2000. *Opinion of the Scientific Steering Committee, adopted 27–28 November 2000*. [http://europa.eu.int/comm/food/fs/sc/ssc/out150\\_en.pdf](http://europa.eu.int/comm/food/fs/sc/ssc/out150_en.pdf) (2 July 2001).
- European Commission. 29 November 2000. *European Commission decides new measures on BSE: Exceptional events call for an exceptional response*. [http://europa.eu.int/rapid/start/cgi/guesten.ksh?p\\_action.gettxt=gt&doc=IP/00/1372101AGED&lg=EN&display](http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/00/1372101AGED&lg=EN&display) (28 February 2001).
- European Commission. 30 November 2000. *Proposal for a Council Decision concerning certain protection measures with regard to transmissible spongiform encephalopathies and the feeding of animal protein*.

- [http://europa.eu.int/eur-lex/en/com/dat/2000/en\\_500PC0820.html](http://europa.eu.int/eur-lex/en/com/dat/2000/en_500PC0820.html) (2 July 2001).
- European Commission. 2001. *Consumers: Introduction. Activities in the European Union: Summaries of Legislations*. <http://europa.eu.int/scadplus/leg/en/lvb/l32000.htm> (26 June 2001)
- European Council – Agriculture. 20 November 2000. *The 2309<sup>th</sup> Council meeting, Brussels, 20 and 21 November 2000*. Press release: 436- nr: 13431/00 <http://ue.eu.int/newsroom/NewMain.asp?LANG=1> (3 July 2001).
- European Council – Agriculture. 4 December 2000 (15 January 2001). *2000/766/EC Council Decision of 4 December 2000 concerning certain protection measures with regard to transmissible spongiform encephalopathies and the feeding of animal protein*. [http://europa.eu.int/eur-lex/en/lif/dat/2000/en\\_300D0766.html](http://europa.eu.int/eur-lex/en/lif/dat/2000/en_300D0766.html) (29 June 2001).
- Federation of Icelandic Fish-Processing Plants. 2001. <http://sf.is/skjol/inn-utflutningur/2000%20mjologlysi2.xls> (5 June 2001).
- George, A. (1980). *Presidential Decisionmaking in Foreign Policy: The Effective Use of Information and Advice*. Colorado: Westview Press.
- Griffiths, R.T. and H. Pharo (1995). *Small States and European Integration: Literature Survey and Evaluation*. Advanced Research on the Europeanisation of the Nation – State (ARENA), Paper No. 19. Norway: University of Oslo.
- Grönvall, J. (2000). *Managing Crisis in the European Union: The Commission and 'Mad Cow Disease'*. Karlstad: Swedish Agency for Civil Emergency Planning.
- Gsthöhl, S. (1996). 'The Nordic Countries and the European Economic Area.' In *The European Union and the Nordic Countries*, edited by L. Miles. London: Routledge.
- Gudmundsdottir, A. (2002). *Íslenskur vinnumarkaður á umbrotatímum: Sveigjanleiki fyrirtækja, stjórnun og samskipti aðila vinnumarkaðarins*. [Restructuring of the Icelandic labor market model: Flexibility, management and industrial relations.] Reykjavík: Háskólinn í Reykjavík.
- Gudmundsson, O. (November 1997). Notes from reports of the Icelandic Feed, Seed and Fertilizer Inspectorate that were sent to the Icelandic Ministry of Agriculture concerning a SCAN meeting. Unpublished.
- Gudmundsson, O. (1999). Speech for the Icelandic Farmers' Association, 1999. *Breytingar á reglum með eftirlit með fæðri til samræmis við nýjar reglur Evrópusambandsins*. [Changes in regulations regarding animal feed surveillance according to the new EU regulations.] Unpublished.
- Gudmundsson, O. (20–21 November 2000). Personal notes from the Standing Committee on Animal Nutrition meeting (SCAN). Unpublished.
- Gunnarson, Gunnar Snorri. Icelandic Ambassador in Brussels. Personal interview, 6 September 2001.
- 't Hart, P., U. Rosenthal, and A. Kouzmin (1993). 'Crisis Decision Making: The Centralization Thesis Revisited'. *Administration & Society*. 25:1.
- Hauksson, U. (2002). *Gert út frá Brussel? Íslenskur sjávarútvegur og Evrópusambandið-Sjávarútvegsstefna ESB rannsókuð út frá hugsanlegri aðild Íslands að sambandinu*. [Our Common Fishery Resource: The EEA Countries – Iceland and Norway – and the Common Fisheries Policy of the European Union.] Reykjavík: Háskólaútgáfan.
- Icelandic Embassy in Brussels. October – December 2000. *Yfirlitskýrsla sendiráðs Íslands í Brussel október-desember 2000*. [Status report from the Icelandic Embassy in Brussels to the Ministry for Foreign Affairs Oct-Dec 2000]. Unpublished.

- Icelandic Ministry of Agriculture (31 January 2001). Press Conference. <http://landbunadar-raduneyti.is/interpro/lan/lan.nsf/pages/news0019>
- Icelandic Ministry of Fisheries in Iceland (1 December 2000). A letter to the EU Agricultural Ministers regarding the Commission's proposal.
- Icelandic Ministry for Foreign Affairs (2000). *The Place of Iceland in European Co-operation 1999–2000*. Reykjavík: Ministry for Foreign Affairs.
- Icelandic Ministry for Foreign Affairs (14 November – 18 December 2000). *Lotus GoPro*. A database containing e-mails, letters, internal reports, minutes and notes. Unpublished: Ministry for Foreign Affairs.
- IFOMA (International Fishmeal & Oil Manufacturers' Association) (16 November 2000). Letter to the Icelandic Association of Fishmeal Manufacturers.
- Joint PM (30 November 2000). The PM that Iceland and Norway issued to the SVC protesting the fishmeal ban.
- Katzenstein, P. (1985). *Small States in World Markets: Industrial Policy in Europe*. Ithaca and London: Cornell University Press.
- Morgunbladid* – a daily morning paper (1 December 2000). 'Miklir hagsmunir í húfi' [Great interests at stake] [http://safn.mbl.is/mm/gagnasafn/pr\\_grein.html?radnr=537310](http://safn.mbl.is/mm/gagnasafn/pr_grein.html?radnr=537310) (25 January 2001)
- Morgunbladid* – a daily morning paper (3 December 2000). 'Áætlun ESB er geggjuð' [EU measures are crazy] <http://safn.mbl.is/mm/gagnasafn/grein.html?radnr=537660> (25 January 2001).
- Morgunbladid* – a daily morning paper (5 December 2000). 'Landbúnaðarráðherrar leyfa áfram fiskimjöl í dýrafóðri' [Agricultural Ministers allow fishmeal in animal feeding] [http://safn.mbl.is/mm/gagnasafn/pr\\_grein.html?radnr=538055](http://safn.mbl.is/mm/gagnasafn/pr_grein.html?radnr=538055) (25 January 2001).
- National Economic Institute (2001). *Percentage breakdown of exported goods (fob) by industries 1901–2000*. <http://www.ths.is/rit/sogulegt/a0704.xls> (21 October 2001).
- National Economic Institute (14 December 2001). *Historical Statistics 1901–2000* <http://www.ths.is/rit/sogulegt/a0704.xls> (25 July 2002).
- Newlove, L.M., E.K. Stern, and L. Svedin (2000). *Auckland Unplugged*. Karlstad: Swedish Agency for Civil Emergency Planning.
- Olafsson, B.G. (1998). *Small States in the Global System: Analysis and Illustrations from the Case of Iceland*. Aldershot: Ashgate.
- Palmason, Snorri Runar. Icelandic Fisheries Counselor in Brussels. Personal interview, 21 July 2001.
- Respondent A. Personal interview, 20 March 2001.
- Respondent B. Personal interview, 4 March 2001.
- Respondent C. Personal interview, 12 March 2001.
- Respondent K. Personal interview, 5 April 2001.
- Respondent R. Personal interview, 2 June 2001
- Respondent Z. Personal interview, 21 July 2001.
- Rosenthal, U.; P. 't Hart; and M. Charles (1989). The World of Crises and Crisis Management. In *Coping with Crisis: The Management of Disasters, Riots and Terrorism* edited by U. Rosenthal, P. 't Hart, and M. Charles. Springfield: Charles C. Thomas.
- Snaevarr, S. (1993). *Haglýsing Íslands*. [Icelandic Economy] Reykjavík: Heimskringla.

- Statistic Iceland [Hagstofa Íslands] (2003). *Export by branches of processing and by commodities 2000–2001*. [http://hagstofa.is/template\\_db\\_frameset.asp?PageID=852&ifrmsrc=/uploads/files/trade2001/trade04.xls&Redirect=False](http://hagstofa.is/template_db_frameset.asp?PageID=852&ifrmsrc=/uploads/files/trade2001/trade04.xls&Redirect=False) (8 December 2003).
- Stern, E. (1999/2003) *Crisis Decisionmaking: A Cognitive Institutional Approach*. Stockholm: Swedish National Defence College.
- Sundelius, B., E. Stern with F. Bynander (1997). *Krishantering på svenska – teori och praktik* [Crisis Management the Swedish Way: Theory and Practice]. Stockholm: Nerenius & Santerus förlag.
- Thorhallsson, B. (2000). *The Role of Small States in the European Union*. Aldershot: Ashgate.
- Thorhallsson, B. (2001). Stjórnarsýslumál.' In *Evrópuúttekt Samfylkingarinnar* [Public administration issues. In the European research by the Social Democratic Alliance]. Reykjavík: Samfylkingin.
- Thorhallsson, B. (2002). "Consequences of a Small Administration: The Case of Iceland." *Current Politics and Economics of Europe*. 11:1, p. 61–76.
- Valdimarsson, J.S. 2001. The Deputy Manager of the Icelandic Association of Industries. *European Integration: The Case of Iceland. What lies ahead?* Speech for the Maltees associations of industries and commerce. <http://www.si.is> (21 June 2001).





# Chapter 5

## The Stranding of Ms. Vikartindur

*Asthildur Elva Bernhardsdottir and Soffia Gudmundsdottir*

### *1 Introduction*

In March 1997 the liner (cargo ship) MS Vikartindur was in route to Reykjavik, sailing the so-called Northline for the shipping company Eimskip.<sup>1</sup> An engine failure was discovered in one of the ship's engines, marking the beginning of a course of events, which ended in the stranding of the vessel. This constituted one of the biggest vessels stranding in Iceland.

The Vikartindur was owned by a German company, but had been leased by Eimskip. The ship was specifically designed for container freight. At the time of the stranding, it was loaded with 248 containers both in the hold and on the deck, containing approximately 2700 tons of various imported goods valued at about 500–700 million Icelandic crowns (approximately US \$4,500–5,600). There were eighteen crewmembers on board plus the stevedore supervisor who was an employee of Eimskip.

The captain of the Vikartindur repeatedly declined the assistance offered by other ships until about an hour before the ship ran aground. The coast guard vessel Aegir lost one crewmember, because of the extremely difficult rescue conditions, when trying to tow the Vikartindur. At about the same time, the anchor chains of the Vikartindur broke and the ship drifted to shore. The Icelandic Coast Guard (ICG) helicopter was sent from Reykjavik at 20:00 and arrived at the scene just before the ship stranded. It took the helicopter crew one hour to rescue the ship's crewmembers.

It was not possible to save the stranded vessel and most of the 248 containers went overboard. The stranding quickly became a concern for the environmental authorities, because of the risk of pollution due to the oil and dangerous substances aboard the ship. In addition, there was a considerable amount of import goods aboard the ship that were not necessarily considered dangerous to the environment but spread for miles along the shoreline.

The adverse weather conditions, the need for outside assistance, and unclear administrative procedures hampered all of the attempts to recover the cargo the first week after the stranding. Although the amount of pollution was minor, the operation turned out to be both a large-scale undertaking and a very difficult one.

The aftermath of the stranding of Vikartindur caused a heated public debate about how the crisis had been managed. All salvage and clean-up measures at the site were heavily criticized and the criticism was directed towards the administrative preparedness and response (in particular: organization of work, the decision-making process and operational procedures). Even though this crisis did not result in serious environmental pollution, it is still worthwhile for the administration to take a closer look at its own structure. The aim of this study is to analyze the main decisions and administrative procedures taken in the aftermath of the

---

<sup>1</sup> Eimskip – The Icelandic Steamship Company Ltd. is a transportation and investment company in Iceland and one of the country's largest privately owned companies.

Vikartindur stranding and examine the response of the administration, or lack thereof, in trying to correct the obvious weaknesses in the system. The objective is to highlight the lessons learned in order to increase and improve the level of preparedness.

## 1.1 DEFINING THE CRISIS

The definition of a crisis in this study is based on the one developed by Sundelius, Stern and Bynander (1997). According to their definition, it is the perceptions of the actors involved which are crucial in determining whether or not a situation can be described as a crisis. A crisis occurs when the central players feel that: important values are on the line, limited time is available, and the circumstances are marked by a great deal of uncertainty (Sundelius et al., 1997).

But how then did the Vikartindur situation relate to the crisis definition given above? Before answering that question, the fact must be considered that the incident presented two different kinds of crises: the first concerning safety issues and the latter concerning environmental issues. In Stern's research on Sweden's response to the Chernobyl accident in 1986, he pointed out the limited interest shown in the decision-making process regarding environmental accidents. It is possible to apply part of the crisis definition regarding "values at stake" to such accidents, although it is more difficult to put environmental accidents into the context of the time factor and/or the uncertainty factor (Stern, 1999). Each of the three factors and how they affected the stranding crisis as whole are considered in the following sections.

### *1.1.1 Values at stake*

Firstly, the lives of the crewmembers of both the Vikartindur and the coast guard vessel Aegir were directly put in danger.

Secondly, the environment was put in danger because of the risk posed by the oil and dangerous substances on board. There are fish spawning grounds in this area.

Thirdly, the reaction to the stranding in both the media and the public resulted in the fact that the professional integrity of the administrative response bodies and the administration's response to the crisis were put under attack.

### *1.1.2 Limited time*

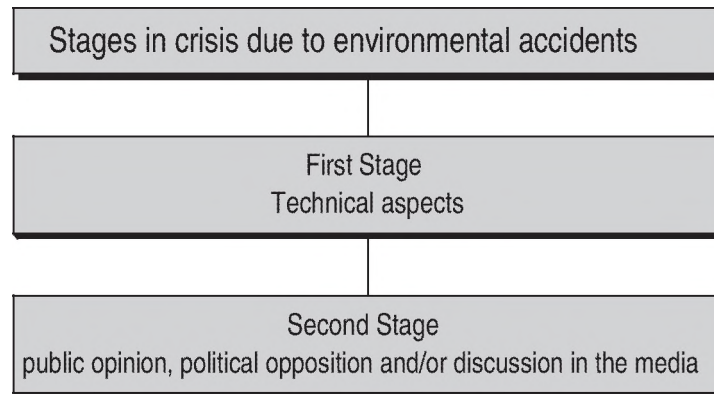
There should have been enough time for rescuing the vessel after discovering the engine failure in the morning; the stranding occurred at 20:00 later that same evening. However the skipper did not feel that there was limited time once the engine failure had been detected. Eimskip and the Coast Guard perceived the lack of time more seriously and told the captain so. Once the Vikartindur did eventually request assistance (several hours after the engine failure was detected), there was even less time available for rescuing the vessel. When the danger of environmental pollution is present, it is of utmost importance to react quickly and timely, even if human lives are not directly at stake.

### 1.1.3 *Circumstances of uncertainty*

From the time the engine failed, there was a great deal of uncertainty. It escalated to a peak when Aegir's attempt to rescue the ship failed resulting in the death of one crewmember. The infictive question was if the crewmembers and the ship could be rescued. There was also the uncertainty around the extent and risk of environmental pollution.

### 1.1.4 *Crisis stages in environmental accidents*

Stern (1999) distinguished between the first and the second stages in acute environmental crises. The first stage concerns technical aspects, i.e. to find resources and implement actions in order to reduce and/or withstand the impact of an accident. Public opinion, political opposition and/or discussion in the media may be catalytic in triggering a second stage crisis. Should this happen, the response bodies not only need to tackle the accident, but also to defend and justify their decisions and actions in face of the criticism. In the case of the Vikartindur stranding, it is quite evident from the analysis of the crisis that it did reach the second stage.



As is the case with many other crisis situations stemming from environmental accidents, it was difficult to determine when the Vikartindur crisis was really over. The impact of environmental pollution does not usually appear until some time has passed and its effects can remain for a long time thereafter.

The current authors decided to cover the course of events beginning with the engine failure the morning of March 5 until April 6, the day the Environmental and Food Agency of Iceland (EFAI) completed their duties on the site and the imminent danger of oil pollution had passed. (See Appendix I for a complete chronology.) In the analysis of the aftermath, the time after April 6 up until the present has also been taken into consideration.

## 1.2 FOUNDATION OF INSTITUTIONS AND ORGANIZATIONS AND THEIR ROLES

The following section introduces the ministries, public institutions, committees, and rescue operations as well as their various legal and administrative duties in relation to the stranding of the Vikartindur. The Vikartindur crisis was a matter for the Ministry of Justice, the police,

the Icelandic Coast Guard, the Icelandic Marine Accident Investigation Board, the National Life-Saving Association of Iceland, the Ships Reporting Duty, the Icelandic Maritime Administration under the Ministry of Communications, the Ministry for the Environment, the Environmental and Food Agency of Iceland, and the District Magistrates.

### *1.2.1 The Ministry of Justice*

The issues under the management of the Ministry of Justice are stipulated in Act No. 73/1969 by the Government of Iceland. The Division of Police and Judicial Affairs is in charge of issues pertaining to crises such as those mentioned in this study: when a vessel is in danger at sea or when a ship strands. The Chief of Police is the head of civil defense in the relevant district and holds an important role as such when responding to crises. Each district is charged with government administrative services: police services, customs control, collection of public fees, and so on.

### *1.2.2 The Icelandic Coast Guard*

Coastal guard activities in Iceland began shortly after 1920, first using chartered vessels, and by 1926 Iceland had its very own coast guard vessel. The main tasks of the Icelandic Coast Guard (ICG) have been concerned with the protection of the fishing grounds, as well as rescue operations. In addition, it has in accordance with the law administered various tasks along the Icelandic coastline and on the shelf. In 1930 the Icelandic Coast Guard was turned over to the Icelandic State Shipping Authority, and in 1952 it was made an independent institution and a special director was employed to manage it (Icelandic Coast Guard, 20 February 2002). At its headquarters in Reykjavik, the Icelandic Coast Guard operates a maritime rescue center, "Maritime Rescue Co-ordination Centre (MRCC) Reykjavik Ocean." From this center all IRC operations are controlled both in the air and at sea. The MRCC Reykjavik Ocean is in direct contact with the Meteorological Office of Iceland, the Area Control Center, the National Life-Saving Association of Iceland, the Reykjavik Police, the Civil Defense, as well as the Keflavik Airport Defense Force. In the event of a national emergency, the civil defense coordinated emergency plan is followed by the center.

The Icelandic Coast Guard is the authority mandated with overseeing that foreign vessels report their coordinates while in Icelandic waters according to national legislation and international agreements, as well managing search and rescue services to seafarers in the waters around Iceland, in cooperation with national and foreign parties. Together with ICE-SAR and the Iceland Telecom, the Icelandic Coast Guard forms the Supreme Command of search and rescue in Icelandic waters and its shores. Ever since its establishment, the Icelandic Coast Guard has been under the auspices of the Ministry of Justice.

### *1.2.3 The Icelandic Marine Accident Investigation Board*

In 1963, after a three year period with severe and frequent shipping accidents the Parliament adopted a proposal to the effect that the government should be in charge of overseeing a public investigation on the causes of these accidents. The Minister of Transportation set up a



committee to work on the investigation and in 1965 it submitted a report based on detailed inquiries of 106 accidents at sea which had occurred from 1960 to 1963. Such research was not taken up again until 1970 when a new law, No 52/1970, entered into force and the committee was re-established (Icelandic Marine Accident Investigation Board, 20 February 1997). The comprehensive law on how to conduct marine accident investigations, No 68/2000, replaced the provisions of the Maritime Act. This legislation increased the independence of the Marine Accident Investigation Board; up until this point, issues surrounding the causes of accidents at sea had been in the hands of the police and special extraordinary courts, which had been convened to look into such accidents. The board should be used to promote preventive actions and increase the safety of ships at sea.

According to the law, the role of the Icelandic Maritime Administration includes making proposals for improvements and notifying the board of the results (The Icelandic Maritime Administration, 4 March 1997).

#### *1.2.4 The National Life-Saving Association of Iceland (now ICE-SAR)*

The goal in establishing the National Life-Saving Association of Iceland in 1928 was to prevent the many accidents at sea that took several lives every year. Accidents at sea were, at that time, much more frequent in Iceland than in the neighboring countries and the loss of fishermen was also high. In a relatively short time the association became one of the most powerful social movements in Iceland since there was an increasing demand to take charge of more and more aspects of preventing accidents at sea and on land – and rescue operations when they did occur (Arnalds, 2000).

In 1999 the National Life-Saving Association and the National Association of Search and Rescue teams merged to form the ICE-SAR. A group called Maritime Rescue Center Coastal (MRCC Coastal) is one of the several units operating within the association assisting the Ships Reporting Duty in operations at sea in the MRCC Reykjavik Coastal. The unit is comprised of experienced search and rescue team members, who have a good knowledge of maritime rescue. The association works in collaboration with the Icelandic Coast Guard and the Iceland Telecom Ltd.

#### *1.2.5 The Ships Reporting Duty*

The first notion of a reporting duty for all Icelandic vessels was conceived within the National Life-Saving Association in the beginning of the 1950s. It was sparked by a marine accident where a vessel went down with the entire crew and which was not reported missing until a few days after the accident had occurred. After this incident the Althing (Parliament) proposed the daily monitoring of Icelandic fishing vessels (Arnalds, 2000).

In the spring of 1968 Icelandic fishermen and the National Life-Saving Association jointly established the Ships Reporting Duty. The founding of the Ships Reporting Duty has been considered one of the key steps in increasing safety for seafarers. This also served to reassure the seafarers' relatives and loved ones, who often waited without knowing the destiny of their loved ones for weeks, even months, on end.

The Ships Reporting Duty receives precise information on the location and navigation of vessels in Icelandic waters. Every ship crew is obliged to report which harbor they are sailing

from and the time of the ship's departure. The same goes for the arrival. While at sea, the crew is required to report twice a day to the Ships Reporting Duty.

The Ships Reporting Duty possesses priceless information on search and rescue operations in Icelandic waters and constitutes therefore an important link in maritime rescue operations around Iceland. The safety net is closely interconnected throughout the country and there is close cooperation with the Iceland Telecom coastal stations, the police, harbor staff (a part of the sphere of the Icelandic Maritime Organization), the Icelandic Coast Guard, the national search and rescue teams, and other parties, which play key roles in the security net.

Pursuant to the legislative act adopted by the Parliament in 1977, the National Life-Saving Association of Iceland (now ICE-SAR) is charged with the continued supreme command and operation of the Ships Reporting Duty. In 2000 an automatic reporting duty system became operative and now equipment aboard the ships automatically transmits notices to the Icelandic Ship Duty Reporting System, either via an Iceland Telecom Ltd. coastal station or by satellite. This automatic system means greater safety for seafarers (National Life-Saving Association, 2003).

### *1.2.6 The Ministry of Communications under The Icelandic Maritime Administration*

The Ministry of Transportation and Communication was established with Act No. 73/1969, and maritime affairs and security issues pertaining to them are among the affairs with which this ministry is charged.

On December 1, 1878 the Icelandic governing body began its service to seafarers when the first lighthouse in Iceland was put into service. Since then the history of lighthouses and ports has been intertwined with the development of shipping operations and navigation. On October 1, 1996 the Icelandic Maritime Administration began its operation with the integration of the Directorate of Shipping and the State Lighthouse and Port Authority, under the supreme command of the Ministry of Transportation and Communication, in accordance to the legislative act on the Icelandic Maritime Administration No. 6/1996. By charging the Ministry for the Environment with these duties, as expounded here below, the role of the Icelandic Maritime Administration changed. This change primarily entailed the supervision of seafarers' safety and created efficient and secure conditions for navigation and fishing in Icelandic waters. Among its tasks is the coordination of national and foreign regulation in the area of maritime affairs (Icelandic Maritime Administration, 4 March 1997).

### *1.2.7 The Ministry for the Environment and The Environmental and Food Agency of Iceland*

In 1976 the Parliament mandated the Ministry of Social Affairs with the task of coordinating all government matters concerning the environment.<sup>2</sup> Then this task was put given to the Ministry for the Environment in 1990, according to Act No. 3/1990: Article 1, amending Act No 73/1969 on the Government Offices of Iceland. In addition, issues formerly within

---

<sup>2</sup> The first piece of legislation on planning came into effect in 1921 and partially addressed environmental matters.

the realm of six other ministries, institutions and agencies were also transferred to the Ministry for the Environment; they included: the National Land Survey of Iceland, Icelandic Institute of Natural History, Nature Research Centre at Lake Myvatn, Nature Conservation Council, the Meteorological Office of Iceland, the Planning Agency, and the Wildlife Management Institute.

One such issue is pollution prevention. Initially, the provision was made that the Environmental and Food Agency of Iceland would be under the supreme command of the Ministry for the Environment concerning pollution prevention, and the same applies to the Directorate of Shipping with regard to marine pollution prevention. With Act No. 54/1994, a change was made so that the Environmental and Food Agency of Iceland under the Ministry for the Environment took over the management of all issues regarding legislation on hygiene and public health control. With the provisions included in Act No 70/1995 (law amending Act No. 81/1988), the Division of Pollution of the Directorate of Shipping was transferred to the Environmental and Food Agency of Iceland which at that time was in charge of protecting Icelandic waters from pollution as stated in Act No. 32/1986. The duties of the Environmental and Food Agency of Iceland were transferred to a new agency, the Environment and Food Agency, with Act No. 90/2002 which took effect on January 1, 2003. The Icelandic Maritime Administration is still in charge of issues regarding vessels and their equipment.

### 1.3 REFERENCES

This research draws extensively upon the Supreme Court of Iceland Ruling No. 290/1999, the statement of the Icelandic Maritime Administration submitted to the Director of Public Prosecutions dated July 24, 1997, and Committee Report Nr. 18/1997 of the Marine Accidents Investigation Committee dated October 1998. In addition, much of the material used in this research is based on the report of October 14, 1997, written by the Director of the Office of Marine Environmental Protection and submitted to the Committee for the Prevention and Response on Acute Marine Pollution. In the Director's report all communications in connection to the stranding (including letters and emails) are published as well as a review and assessment made by the Director of the measures taken in order to protect the environment. Furthermore, there are various assessments and reports regarding the accident and operations from the Committee for the Prevention and Response on Acute Marine Pollution. The diaries of the Director of the Office of Marine Environmental Protection and those of his assistants, which written during the operations, were also very useful sources.

In order to depict the legal framework within which the administration was able to legally act at the time of the stranding, various pieces of legislation were examined; for example, those involving the response to danger at sea, the salvaging of a vessel and cargo, the recovery of oil, the cleanup of the shores, and the removal of the wreck. Furthermore, the legislative changes implemented after the stranding of the *Vikartindur* were examined. An important element of this research was the report written by Thorgeir Orlygsson, Professor of Law at the University of Iceland, at the request of both the Ministry of Justice and the Ministry for the Environment. The aim of the report was to examine to what extent the authorities had the right and the obligation to intervene and interfere when a ship gets stranded, according to the law.

Information was also obtained from the ministries, institutions and organizations involved in the rescue work at sea as well as those involved with the protection of the environment. Interviews were taken with representatives from the Ministry for the Environment, the Ministry of Justice, and the Ministry of Transportation and Communication, the Environmental and Food Agency, the Icelandic Maritime Administration, the Icelandic Coast Guard, International Federation of Transport Workers, the District Magistrate in the District of Rangarvalla County, the Office of Environmental Health and Hygiene in South Iceland, and the Chairman of the Council of the Djupar Municipality. Furthermore, information was obtained from the shipping company, Eimskip. Lastly, various facts were obtained from a number of websites and homepages.

An essential element in this research was to analyze the discussions in the media regarding the stranding, since the media was influential in shaping the crisis. Primarily, the printed media was examined, but also other media, such as the radio and the television. An editorial printed in the newspaper *Dagbladid* on March 11, 1997 is specifically quoted. This editorial clearly presents the criticism regarding the authorities' response to the stranding, or rather the alleged lack thereof. The segments that are quoted serve to describe the atmosphere with which the administration had to contend during the rescue operations.

Comparisons were made with the research findings in the CRiSMART's case bank, in addition to other research conducted on pollution accidents resulting from strandings. Lastly, the materials were examined and theoretical insight was cast upon public administrations' response to crisis situations.

## *2 Administration and its Legislative Environment*

### 2.1 ADMINISTRATION AND COMMUNICATION CHANNELS

The responsibility of overseeing specific factors related to the response was aimed at reducing pollution caused by an oil spill/debris, recovery of cargo and the shipwreck itself. The different bodies and their various tasks have been summarized in the table below. There are two ministries, in particular, that have a binding legal commitment in such incidents: the Ministry of Justice and the Ministry for the Environment.

*Table 2–1: The division of responsibility and specific tasks in the event of a shipwreck*

<b>Task</b>	<b>Legislation</b>	<b>Executive body</b>	<b>Ministry</b>
Oil	Marine pollution	Environmental and Food Agency	Ministry for the Environment
Dangerous cargo (IMDG)	Marine pollution – Law on Dangerous Chemicals	Environmental and Food Agency	Ministry for the Environment
Ship rescue/recovery	Strandings and jetsam	District Magistrate	Ministry of Justice
Cargo recovery	Strandings and jetsam	District Magistrate	Ministry of Justice

Task	Legislation	Executive body	Ministry
Law enforcement at the site of the stranding	Strandings and jetsam	District Magistrate/ Chief of Police	Ministry of Justice
Rubbish/debris	Act on hygienic and pollution control	Public Health Committee	Ministry for the Environment
Dangerous cargo as garbage	Act on hygienic and pollution control	Public Health Committee	Ministry for the Environment
The wrecked ship	The Nature Conservation Act	Municipal authority	Ministry for the Environment

Source: Egilson, 1997

Figure 1. Administrative cooperation regarding ships in danger at sea, at risk of stranding and/or marine pollution.

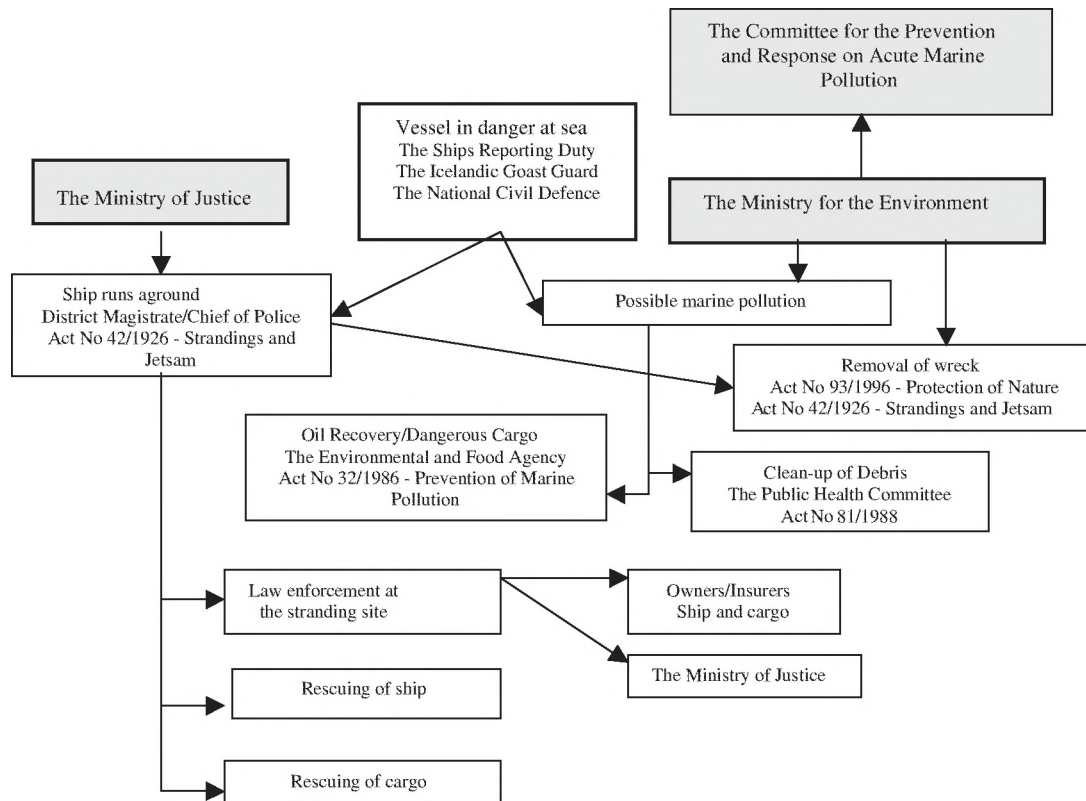


Figure 1 illustrates the fact that the responsibility of the government differs according to the different fields. This differentiation requires active and well-planned cooperation by the executive management.



## 2.2 LEGAL CODES

In the event of a vessel running aground, the rights and obligations of the authorities for intervention and interference are stipulated in various legal documents. A summary of the legislation on intervention and interference regarding strandings is provided in Appendix 2 of this chapter. The summary contains an overview of the main legal provisions and specific legislative articles concerning the liability and management of such situations.

### *3 Decision-Making Occasions*

In accordance to the methodology used in this study an attempt is made to view the chain of events from the perspective of those who responded to the circumstances surrounding the stranding. Behind each decision-occasion lies an impetus, i.e. an incentive to react to a certain problem. The question asked by the one who makes the decision under such circumstances is “What shall I do now?” The stimulus provoking the first decision-making occasion is the initial crisis stage for the decision makers. For the captain of *Vikartindur*, this was the first report of the engine problem at 07:13 in the morning of March 5, 1997.

The crisis as a whole is viewed from the Icelandic administration’s point of view with an additional in-depth analysis of what influenced the decision making of *Vikartindur*’s captain. The stimulus instigating the Icelandic Coastal Guard (ICG) was initiated when information about the engine failure on the *Vikartindur* was received at 12:00.

In the wake of the stranding followed a chain of problems that needed to be solved. The six most important decision-making occasions with regard to the reactions of the administration are discussed here.

<b>Decision-Making Occasions</b>
1. Is assistance needed after an engine failure on <i>Vikartindur</i> ?
2. How to rescue the <i>Vikartindur</i> crew?
3. Who is responsible for the operations regarding the stranding?
4. How to counteract the danger of pollution?
5. Should the Committee for the Prevention and Response on Acute Marine Pollution be convened?
6. How to prioritize the tasks and divide the costs?: Need for oil recovery Cargo needs to be salvaged How to clean the shore? Debris Dangerous cargo Drifting Oil

### *3.1 Is Assistance Needed after an Engine Failure on Vikartindur?*

The warning signal sounded in the engine control room on Vikartindur at 07.13 on March 5, 1997. This was the first link in a chain of unfortunate events that the Vikartindur crew had to deal with on the vessel's last day at sea. It was primarily in the hands of the captain to assess the actual needs and accept assistance because of the engine problems. There were also a number of other people who began to assess this need and tried to influence the captain's decision.

The stevedore supervisor of Vikartindur, who was a member of Eimskip's personnel, asked the captain at the time of the engine failure whether they should notify the ICG or not. The stevedore supervisor said that he had taken into account the drifting speed of the vessel, which meant it would only take four hours to reach shore, and that in his opinion it was most appropriate to use this time to call a coast guard vessel so it could reach Vikartindur in good time. The captain did not consider it necessary to contact the ICG, as he thought there was still enough time to repair the broken engine, and throughout the course of the day he repeatedly refused their assistance (Morgunbladid, 11 March 1997).

According to the Director of the Marine Operations at Eimskip, they first received information at around 09:30 that Vikartindur was having trouble because of an engine failure. The ship was located 12 nautical miles (nm) south of the mouth of the Thjorsa River and was drifting at a speed of two point five knots per hour. This area is very open to the south, and southwesterly waves can come surging close to the continental shelf. The weather conditions were adverse and much worse conditions were predicted later that day.

About one hour later, the vessel was contacted and it was then located approximately seven nm away from the shore, with a wind force of six to seven m/s with the heavy rolling sea, and the ship was drifting shoreward. At approximately 11:00 the engine had started running but stopped again about 12:00. At that time it seemed the ship would most definitely drift to shore if nothing was done, as it lay at an angle perpendicular to the wind and the waves at a distance of around five nm from the shore with under keel clearance<sup>3</sup> of around 60 m. According to the Meteorological Office of Iceland, the wind speed in Eyrarbakki was SW-15 M/s and in Storhöfði WSW-19 M/s; in-between checks the wind speed reached up to 26 M/s.

After receiving information from the stevedore supervisor that the engine had stopped a second time, a member of the Eimskip staff took the initiative to request that the ICG send a ship to Vikartindur, as there was a concern that the situation might develop into a serious emergency. The Head of Surveillance Operations at the ICG reported that the coast guard vessel Aegir was sent to the scene and at the same time they had informed a helicopter unit of the incident, as well as notified the defense force helicopter unit. At this time, the ICG had repeatedly contacted Vikartindur and pointed out that the ship was in danger and that it was essential to drop the anchors in order to slow down the drifting speed. Eimskip also contacted Vikartindur in order to put pressure on the captain to accept assistance, without any success. Around the same time the German shipping company contacted Eimskip requesting that they contact the ICG to make a deal as to the possible amount of salvage money (Morgunbladid, 8 March 1997).

---

<sup>3</sup> Keel clearance in this case is the depth of the water beneath the ship when it was in the opposite direction of the wind and waves.

The captain of *Vikartindur* saw reason to send out a “security call” at 12:21, which was received by TFV (the radio communications center of the Post and Telegraph Administration in the Westman Islands). In this call the captain announced that the vessel was having engine problems and requested that the vessels in the vicinity show precaution. The radio communications center sent an inquiry to the ICG and to the Icelandic Ship Duty Reporting System (ICEREP), located in the coordination center MRCC Coastal of the National Life-Saving Association of Iceland (NLSA). The captain declined the offer for assistance at that time, and again at 13:22 when the *Herjolfur* ferry offered its assistance. The ICG notified the SAR teams ashore and four NLSA SAR teams would be on alert just before 15:00.

When the coast guard vessel *Aegir* arrived on the scene, *Vikartindur* was located about 2 nm south of the mouth of the *Thjorsa* River with waves up to 12 m and a strong southwesterly wind; the ship was still drifting to the shore. When the anchors were dropped, it was discovered due to the constant motion of the ship and the strain this had caused the anchor windlasses had been damaged. So it was impossible to weigh the anchors.

The Director of the Marine Operations at Eimskip reported that about 14:30 the Stevedore supervisor had said that he did not like the look of things. The captain had not accepted *Aegir*’s assistance and the weather forecast predicted heavy winds. The main engine was running but could only run on “slow” or “dead slow” (meaning a running speed of 3–5 nm, assuming a favorable state of the sea). Eimskip checked into how much it would cost to have *Aegir* follow the ship to port, since, according to the Director, it was not acceptable to leave *Vikartindur* unattended. The ICG replied that only the direct cost of the sailing needed to be compensated. The Director informed the captain of this and emphasized that he should use this service. It would not be tolerated if he did not use every possibility to sail the ship to harbor. A short while later the representative of the shipping company called the Director of the Marine Operations at Eimskip and said that they were about to weigh the anchors and sail. The Director repeated that they should have *Aegir* accompany them and told him how much it would cost for such services.

At 17:35 the ship was located approximately 1.8 nm away from the coast and a short while later *Aegir* contacted *Vikartindur* notifying them that the ship had started to drag its anchor and was drifting closer to shore. The captain disagreed with this. At about the same time, it was decided that it was not necessary to have the defense force helicopter unit on alert, although they could be called out if the situation became more serious.

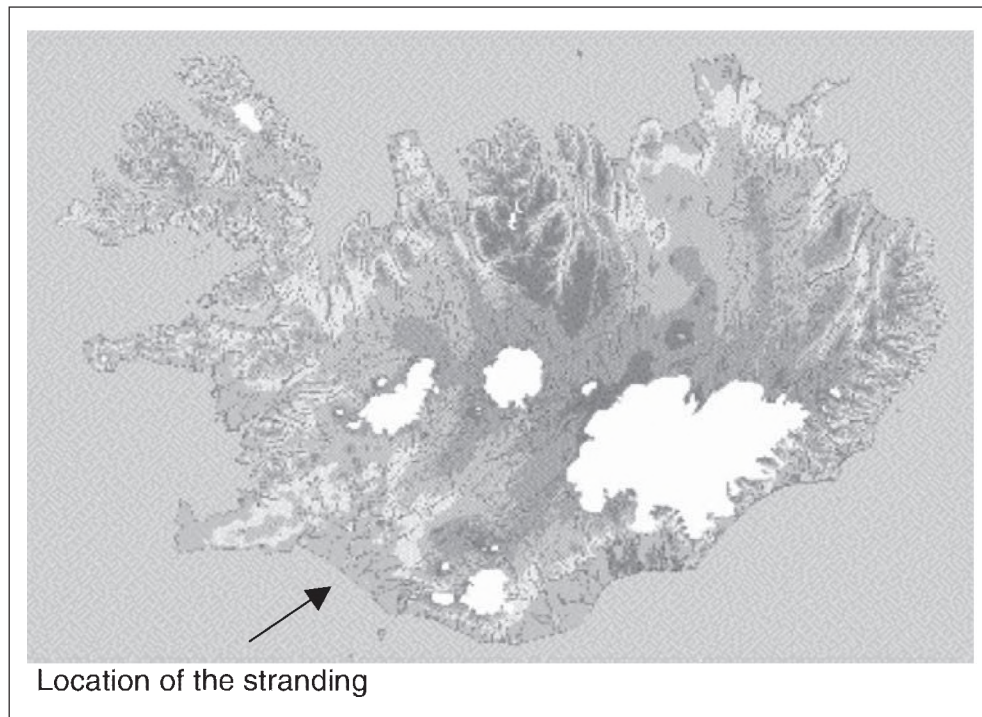
An hour later or so the stevedore supervisor was seriously concerned; the under keel clearance was about 30 m and he could see the surf not far away. He discussed the situation with an old schoolmate on the coast guard vessel and they agreed that the best course of action was for *Aegir* to tow *Vikartindur* and that the ICG helicopter would transport some of the crewmembers away from the ship. The captain declined this, but at 19:00 a decision was made to put up a connecting cable between the two vessels (Morgunbladid, 8 March 1997). The captain said that he had expected the anchors to hold, as they satisfied the strictest requirements for such equipment on a vessel of that size. The crew had begun to make preparations for the possibility that the coast guard vessel would tow *Vikartindur* a little while before the request came that this would be done. The captain had not been convinced that the crew was in danger. He was of the opinion that he had done everything within his power to save the ship. The chief mate also reported that he had not felt that danger was imminent, and that it would be in order to stay in the open sea since the vessel was anchored (*ibid*).

### 3.2 HOW TO RESCUE THE VIKARTINDUR CREW?

When the captain of Vikartindur sent out a “security call” at noon on March 5 this marked the beginning of the preparations for the rescue operation. After the NLSA had transmitted information to the TFV about the ships and boats in the vicinity, they called upon the NLSA SAR teams in the villages of Stokkseyri, Eyrarbakki, Thykkvibaer and Hvolsvöllur requesting that they be put on alert for the possible stranding of Vikartindur.

At 14:40 the ICG helicopter, TF-LIF, was ready for take-off. The NLSA maritime rescue center, MRCC coastal, received a telegram from the TFV. The center reported at 14:47 that Vikartindur was apparently 1.5 nm from the shore. They were in the process of pulling the anchor but it was unclear how long this would take.

The NLSA MRCC coastal responded to this information by contacting the NLSA SAR team which was on alert and ordering them to hurry to the mouth of the Thjorsa River with life saving equipment. The SAR teams from the villages of Hvolsvöllur and Thykkvibaer received orders to go to the east side and the teams



from the villages of Stokkseyri and Eyrarbakki to go to the west side. The NLSA SAR team in Hvolsvöllur requested that the air rescue unit in Hella be put on standby.

A little after 15:30, the SAR teams on the west side of the Thjorsa River announced that they had arrived at the coast, the Vikartindur ship was in sight and they were fully prepared. The SAR team in Selfoss was called out at 18:10, and requested to be put on standby either on the east or west side of the Thjorsa River depending on the possible drift of the Vikartindur. The SAR team in Selfoss called the SAR team in Thorlakshöfn for additional reinforcement.

By afternoon, the weather conditions were getting more adverse, it was getting dark, and the participants in the rescue operation were growing seriously concerned. Pressuring the



captain to seek assistance still had not yielded any results. Thus, the NLSA and the ICG agreed to have the ICG helicopter rescue some of the Vikartindur crewmembers before it became completely dark (Morgunbladid, 8 March 1997a). At 18:47 the captain refused to let part of his crew leave the ship since he needed all of them to perform their duties.

At 19:11 the captain finally requests towing assistance from Aegir. The captain of Aegir reported that two attempts were made to connect a towing cable to Vikartindur. In the first attempt the cable got stuck in a crane in Vikartindur, where the crew was not able to reach it, and it had been cut by the ICG crew. The crew on Aegir then made another attempt, and the captain described how all of a sudden the state of the sea got worse as if “oil had been poured over fire.”

The first breaker came right over the coast guard vessel. Thus, the towing equipment had started moving and the two men, who were attached to a lifeline guarding it, were having trouble because the cable had gotten tangled when the breaker hit. The boatswain who was in the engine room saw that his partners were in trouble and ran out to the deck in order to assist them. So did one of the deckhands, although neither was attached to a lifeline. The boatswain reported that there were no breakers coming over the deck when they ran out. They meant to come quickly to the aid of the others in order to get the cable off the ship. They were busy untangling the cable when someone suddenly shouted “Breaker”! Since the boatswain was not attached to a lifeline, he threw himself onto the anchor chain, holding on to it with his hands and feet. One of the men at the slipway reported that he did not see the boatswain after the big breaker. In fact he had thought there were several breakers in succession; everything had disappeared in the white spray and he had completely lost track of time. When the captain received the news that the boatswain was missing and that the chief officer has broken his leg, he immediately decided to stop any further attempts to connect the cable to the Vikartindur. The Aegir captain informed the Vikartindur crew of this and asked them to see if they could find the boatswain. Then the Aegir captain requested that the ICG helicopter immediately take off to assist the rescue operation (Morgunbladid, 11 March 1997).

Vikartindur stranded at 20:14. Heavy intermittent snowstorms delayed TF-LIF (the rescue helicopter) and it arrived at the ship just before 20:30. The defense force helicopters were unable to reach the scene of the accident because of a storm at Keflavik Airport. The decision was made to pull all the ship’s crewmembers aboard the TF-LIF in one trip, despite the fact that the helicopter is only designed for 14 passengers, not counting the crew. This decision was made by the helicopter crew, as it was evident that making two trips meant that the adjoining line between the ship and the helicopter had to be disconnected, and the rescue man would have to be left behind. Any number of things could have taken place in-between trips, and the situation was so grave that the vessel could have capsized with the superstructure going underwater. The captain explained that this decision had been taken with safety in mind, because by making two trips the ones waiting would also have been endangered, in addition to the rescue man and the helicopter crew. The helicopter crew had anticipated this possibility, and had prepared the helicopter accordingly; earlier in the day, they had removed the standard equipment from the helicopter to make more space in order to make this maneuver possible.

A search flight was made for the boatswain who went overboard from Aegir immediately after the Vikartindur rescue operations were completed. The members of the SAR teams received the Vikartindur crew on shore and they were all taken to Hotel Selfoss to be cared for. The rescuers on shore were unable to see the crewmembers being pulled up from the vessel,



even though the ship was quite near the shore, which gives an idea of how adverse the weather conditions were. There were vehement gusts of forceful winds, heavy rain showers, and heavy hail, so that sand and ice ridges were torn away.

The helicopter then immediately took off for another search flight. The helicopter captain reported that the rescue conditions were extremely difficult. Neither the powerful projectors nor the infrared camera were of sufficient use in the darkness because of the heavy intermittent snowfall. The search lasted two hours, but then the fuel was getting low. The helicopter captain reported that the original plan had been to take the injured man on board of Aegir with the helicopter but because of the turbulent sea and constant snowfall, it turned out to be impossible and it would have endangered both the helicopter crew, as well as the crew on the vessel (Morungbladid, 7 March 1997).

### 3.3 WHO IS RESPONSIBLE FOR OPERATIONS REGARDING THE STRANDING?

The decision makers, who were representatives of the Icelandic administration, spent the first two to three days after the accident defining the legislation concerning the division of responsibility, which unavoidably created friction between the different parties and hence delayed the first response to the incident. Unclear legislation and the uncertainty about which parties were responsible for supervising and controlling the general operations on the behalf of the Icelandic administration were among the most serious obstacles in the aftermath of the incident.

Despite the bad weather, the spring tide and the heavy surfs, a great number of people arrived on the scene the day after the incident. The situation was chaotic as the vessel had rolled in the sand and an approximately 50 centimeter wide tear was visible across its body. Cargo containers had fallen out of the ship causing them to break with the contents drifted ashore. Two representatives from Eimskip, a supervisor and the head of the department for containers came to the site. In addition, Eimskip brought in bulldozers, excavators, pumps and other equipment in order to speed up the operations. In this way the shipping company continued to interact with the public authorities concerning the first rescue operations.

According to the county magistrate, an argument arose between the representatives from Eimskip and those from the national insurance agency. In the beginning it was assumed that these two parties shared the common interest in rescuing the cargo as quickly as possible, but their actions proved the contrary as was apparent when the representatives from the insurance company threatened to walk out of a meeting held by the county magistrate if the Eimskip lawyer was allowed to be present. The representative of the Sudurland Public Health Authority described the uncertainty and conflicts that arose on the site in the beginning:

...Eimskip took a 'dominating position' and ordered almost everyone to leave, after which the Public Health Authority in Sudurland partly took over control. The Environmental and Food Agency of Iceland (EFAL) wishes to control certain aspects (issues concerning the oil). The Ministry for the Environment is in control, as if using a remote control, as well as being the head of supervising the actions in cooperation with the magistrate. For 2–3 days the situation has been characterized by a certain degree of chaos. Many parties have offered their help, but their offers have been turned down. Ideas on how to salvage the ship have been put forth. A number of people have flocked to the site, wanting to get some of the jetsam on the shore.

The legal aspects have been discussed and are found in: The Act on the Stranding of Vessels and Jetsam, The Conservation Act, and The Act on Hygiene and Pollution Prevention. The most useful of these proves to be the regulation on public health and the Sudurland Public Health Authority is required to take the primary responsibility of the case. I yelled into the storm, "Where is the magistrate?" He should have been at the scene, but he had to be in Hvolsvöllur as well, in order to take care of the administrative issues. The few policemen on the scene could only take care of the most urgent matters... (Thordarson, 29 January 2002 and 2 May 2002).

In an interview, the director of office of the Office Marine Environmental Protection disagreed with the assessment made by Thordarson of the Sudurland Public Health Authority with respect to Eimskip's "dominating position" and stated that their involvement was only related to the cargo and nothing else.

Specialists from the German shipping company Peter Döhle in charge of the Vikartindur operation and a Dutch salvaging company also arrived at the stranding site to assess the situation and the feasibility of saving the ship. The representatives of the owner of Vikartindur and its insurance company, The Standard Steamships' Owners Protection and Indemnity Association (Europe) Ltd, met with Eimskip in order to discuss the first actions, and work began on transporting equipment to the stranding site in order to simplify the salvage operations and to try to pump the heavy fuel oil from the ship.

Initially, Vikartindur's insurance company appointed on March 6 a naval engineer with the company Skipataekni as their representative on the scene and on March 7 representative from the consulting company Murray Fenton & Associates Ltd. took over the site operations.

### 3.4 HOW TO COUNTERACT THE DANGER OF POLLUTION?

Having heard on the 22:00 evening news of the stranding, the Director of the Office of Marine Pollution Prevention immediately called the Icelandic Coast Guard to inquire whether any information on the amount of oil in the ship was available. He was told that nothing had been done regarding those matters (Egilson, 1997). Later that evening the Icelandic Coast Guard contacted the Eimskip shipping company in order to obtain information on the amount of oil and other dangerous substances aboard the ship. Subsequently, it was decided that an employee of the Office of Marine Pollution Prevention of the Environmental and Food Agency of Iceland should be sent to the stranding site the next day in order to assess the situation. In the morning of the following day, Eimskip Ltd submitted the following information on the estimated amount of oil on board: 300 tons of heavy fuel oil, 40 tons of diesel oil, and 5 tons of lubricating oil. This information was based on the amounts reported at the last port and the calculated fuel consumption during the voyage to Iceland.

Preparations regarding the recovery of oil from the ship began after Eimskip had submitted information to the EFAI on the estimated amounts of fuel considered to be on board the Vikartindur. Work also began, in cooperation with one of the ICG staff members, in examining how much dangerous cargo was in the containers, and Eimskip was contacted. It was discovered that several containers were marked as dangerous cargo according the IMO definitions, and hydrochloric acids (HCl), bases and solvents for oil paint were among the cargo. Caustic soda was in one of the containers. On the basis of this knowledge, a large area surrounding the stranding site was sealed off on March 6, when it became clear that dangerous substances might spread from the ship as a rip had opened right across the hull of the ship.

In addition, all sorts of goods and containers were spread in pieces across the sandy shore. Further inquiries revealed that the amount was negligible, and it was not considered probable that it would pose any risk to the environment. However, it was revealed that some of these substances might present a hazard to those who came in contact with them and it was checked which parties might participate in operations concerning this dangerous cargo.

It was clear to everyone that the main emphasis was on recovering the oil from the fuel tanks since there was a serious risk that the vessel might overturn and thus an oil spill, which would result in an environmental accident of an unforeseen degree.

In the first stages, it was thought to be necessary to move the ship to the correct angle in order to enable the teams to enter the ship, remove the cargo and pump the oil from it. But several factors rendered this unfeasible. The extremely bad weather, very heavy waves and difficult transporting conditions over the sandy coast during the first days after the incident, all contributed to making it impossible to transport the available machinery and equipment to the ship. In addition, the ship was getting buried into the sand and there was uncertainty as to the stability of the vessel. Another reason for concern was the reclining angle of the ship, since it was somewhat damaged after the continuous onslaught of the sea and cracks were beginning to form in its hull. These conditions were thought to present too much of a danger to allow the recovery teams to go aboard the ship in order to inspect the conditions, assess the damages, and check for an oil leak. The initial operations included preparing and organizing the work needed for recovering the oil. This included, among other things, paving access to the ship.

### 3.5 SHOULD THE COMMITTEE FOR THE PREVENTION AND RESPONSE ON ACUTE MARINE POLLUTION BE CONVENED?

The Committee for the Prevention and Response on Acute Marine Pollution was appointed in 1991 as an assessment committee by the former Minister for the Environment. The vice chairman of this committee (the Director of the Office of Marine Environmental Protection) served as its chairman in the first days after the stranding of the *Vikartindur*, while the chairman was abroad. The vice chairman reported that after thoroughly reflecting the matter, he did not think there was a reason to call the committee to a meeting. He sent an e-mail to the committee members informing them of his decision on March 6, the day after the stranding. In this message he informed the committee of the state of affairs and asked the members to contact him if they wanted the committee to convene (Egilson, 1997). Four days later, one of the members contacted him requesting a meeting. Subsequently, a meeting was convened on March 13 and the role of the committee was discussed since there was an apparent difference of opinions as to its role in the decision-making process concerning the stranding of *Vikartindur*. It was decided to meet again following the conclusion of the rescue operations.

The Minister for the Environment was heavily criticized in Parliament for this decision, and accused of not being aware of the purpose of this special committee; i.e., that if and when accidents occur, it is the purpose of the committee to convene, assess the risk of pollution, and supply guidance regarding the response and operation (Icelandic Parliament, 11 March 1997). The strong reaction of this decision, both in the Parliament and the media, put intense pressure on the administration of the Ministry for the Environment. In a letter from the vice chairman to the Ministry for the Environment, he explained that his decision was based

on the duties of the committee with the main responsibility to collect information on environmental affairs and other critical factors in the event of an environmental accident. He supported his decision with the following arguments:

In the case of an environmental accident there must be available response plans and communication systems. For efficient response at the time of danger, it is necessary to obtain the perspective of as many as possible, although it is necessary that only few make the decisions, and that they work by already existing plans. If not, too much time will be lost (Egilson, 1997).

The undersigned does not consider the Committee for the Prevention and Response on Acute Marine Pollution to be a designated response body. Calling together a committee of five, in order to make decisions regarding a process that is already clear, and with which the committee has not had anything to do in making, is time-consuming and always will be. There are available communications systems that are used to call the appropriate parties to respond to environmental accidents (Egilson, 1997).

The amount of polluting substances that could harm the environment had not yet spilled into the environment. While this is the case, one must concentrate on recovering those. The possible consequences for the environment, because of the accident, are as clear considering the various uncertain factors present: i.e., whether or not the ship will collapse, will the ship break and in that case how will it break, and will the oil spill into the environment and how (Egilson, 1997).

Act No. 32/1986 on the prevention of marine pollution charges the EFAL, in cooperation with the Icelandic Coast Guard and the Icelandic Maritime Administration, to respond to marine environmental incidents. According to this, it is apparent that this committee did not have legal authority in the decisions-making process following the stranding of *Vikartindur*.<sup>4</sup> But because of the complexity in the response measures after the stranding, one might consider it a normal procedure that this committee be immediately activated in the process of independently assessing the cause and effects of the accident. In particular, it was apparent that all foreseen preparations for the rescue operations would be time consuming and require significant coordination of efforts from all parties concerned.

### 3.6 HOW TO PRIORITIZE THE TASKS AND DIVIDE THE COST?

When the Office of Marine Environmental Protection had collected the available information on the amount of oil and cargo, the Director of the Office deemed it necessary to call together all the parties that would possibly take part in some way in the operations connected to the stranding in order to map the roles and the division of tasks and to coordinate the measures. The Director reported that his evaluation of the situation was such that it would require considerable work by the public parties, up to two to three months.

On March 7 the Office of Marine Environmental Protection calls a project meeting at the site in order to assess the situation and to organize further action and response in the event of pollution. Representatives from the owner's insurance company, the Sudurland Public Health Authority and the EFAL were present at the meeting. It was revealed that according to Icelandic legislation, the municipality should take care of matters related to the cleanup of

---

<sup>4</sup> The committee did not have a 'judicial post' and thereby no formal legal authority.



hazardous substances and debris drifting to shore as well as the shipwreck, while the Government should handle matters regarding the response to the possible danger of pollution. Furthermore, it was also revealed at the meeting that bids were being accepted for the oil recovery job; a contract with the Dutch contracting firm Wijismullers was signed later that day. It was also decided that the Office of Marine Environmental Protection would have an inspector on the site surveying the pumping of the oil. In addition, a request was made that all operations regarding the oil recovery be subject to the assessment of the Office of Marine Environmental Protection. As for the debris, it was made clear to the insurance agency that the Sudurland Public Health Authority was the formal surveillance body on behalf of the municipality. Finally, the following priorities were decided with regard to the salvage operations on the stranding site: First to clean up the oil, then the dangerous cargo drifting onshore, then the debris and the other cargo, and at last the ship.

In a letter dated March 7, the Chief of Police of Rangarvalla County made a request to the lawyer of Vikartindur's insurance company that they guarantee the payment of all costs related to the rescuing of the ship and cargo, including the police expenses. The Chief of Police also pointed out that the cargo would be in his care until such guarantees had been paid (in accordance to Act No. 42/1926 on strandings and jetsam).

On March 10, a meeting was held in the Ministry for the Environment which was attended by the concerned parties: the owners of the ship, Eimskip, the Djupar Municipality, the Sudurland Public Health Authority and EFAI. They reviewed the current state of affairs, decided on the nature of cooperation, discussed the best course of action in removing the debris from the sea and the shore, and finally reviewed the appropriate law and regulations. Lastly, the owners of Vikartindur were required to submit a confirmation of a financial guarantee to cover the costs paid by the Icelandic government. Furthermore, the owners had to agree to fulfill their obligations in accordance with Icelandic legislation and the "polluter pays" principle. The owners of Vikartindur complied with this request and submitted a declaration to the Ministry for the Environment stating that the shipping company would take full responsibility for the following operations:

- Recovering the oil in accordance with the instructions provided by the local authorities,
- Removing all dangerous cargo from the site,
- Beginning and supervising the cleanup of dangerous cargo at the site, and
- Removing the shipwreck in accordance with Icelandic law.

At this stage the owner had not yet settled for agreement for salvage operations regarding the rescue of the ship and its cargo with the consent of the chief of police nor provided collaterals in accordance with (the) law on strandings and jetsam (Act No 42/1926). As long as this contract was not settled the chief of police acted as the custodian of the ship and its cargo. Due to different interpretations of the law on strandings and jetsam the magistrate decided to seek clarity from both the Ministry for the Environment and the Ministry of Justice.

On March 19 the lawyer representing the owners of Vikartindur contacted the Ministry of Justice, as it was his understanding that the owners were only required to rescue the oil from the ship, clean-up the debris and the ship itself, but did not have legal responsibilities towards rescuing its cargo. According to a memorandum written on March 20 by Professor Thorgeir Orlygsson to the Ministries for the Environment and for Justice, he made it clear



that the coastal law article 97 clearly states that the owner is responsible for any damages caused when a ship runs aground and is deemed unrecoverable. According to the law on strandings and jetsam (Act No 42/1926), both the ship and its cargo is considered to be the collaterals for all costs that the aftermath of a stranding may cause. If an agreement for salvage operations is made in accordance with the coastal law, then the owner must provide collateral to meet the satisfaction of the Chief of Police. When such an agreement has been made, then the ship and its cargo as collaterals are eliminated.

At a meeting in Hvolsvollur on March 24, the first draft of such an agreement was made and in it the ship's insurance company (Standard P&I Club) was to formally take over the managing of the rescue operations for the cargo and the ship and also cleaning the shore. Along with this statement, the company should guarantee 30 million Icelandic kronur as collateral to the Chief of Police.

At a meeting of the Ministry for the Environment on March 26, representatives from the Icelandic government expressed their dissatisfaction with the repeated delays in the clean-up operations by the owners and its insurance agency, both with regard to debris and salvaging the cargo from the ship. As a result, they were required to submit a operation schedule for these actions. On April 2, in accordance with Icelandic law, the responsible parties submitted a declaration in which they guaranteed the Communal Council of Djupar and the Sudurland Public Health Authority the reimbursement of costs arising from the cleanup, up to ISK 50 million, should these parties deem the clean-up operations insufficient,

Following are the detailed descriptions of the individual decisions in order of priority.

### *3.6.1 Need for oil recovery*

The day after the stranding it was discovered that there was a crack on the side of the vessel and oil was leaking into the sea. The smell of diesel oil was in the air and there were obvious traces of oil pollution in the sand. Barrels with lubricating oil had also drifted to shore.

An employee from the Office of Marine Environmental Protection was at the scene in order to keep tabs on the oil recovery. The recovery of oil from the ship's fuel tanks was a priority, since it was unclear how stable the ship was in the sand, and the danger was that it might collapse, in which case the oil would be difficult, if not impossible, to recover. The insurance agency and the owner made a contract with the Dutch contracting firm, Wijismullers Salvage, on March 7 regarding the pumping and recovery of oil from the ship. However, the company's schedule was not clear at this time, as they had not yet been able to enter the ship and assess the situation. Access to the ship was possible on March 9 but was limited to low-tide conditions. As mentioned in section 3.3, Eimskip had already taken measures to rescue the oil from the ship by bringing in heavy equipment to the site with the purpose of speeding up the process. Equipment and oil pumps from the contracting party arrived at the site on March 10 and were placed in the ship the day after. The task of Wijismullers Salvage was to pump the oil from the ship and send it to the oil distribution company. Access to the site was difficult due to the poor road conditions: the shortest drivable distance to the ship was three kilometers.

Adverse weather conditions, uncertainty regarding the stability of the ship in the sand, and the measures necessary to enable the rescue teams to go aboard the ship were the main factors making it impossible to board the ship until March 10. The pumping of oil from the

ship started on March 12, although the ship had been extensively more damaged by the sea and the breakers washing over her.

Initially, an effort was made to recover the lubricating oil, diesel oil and heavy fuel oil from the ship's tanks. The pumping of the lubricating oil and the diesel oil went well, while the recovery of the heavy fuel turned out to be an entirely different matter. As long as a ship is operating, heating coils in the tanks keep it in liquid form, but when the Vikartindur stranded the heating turned off which resulted in the oil becoming impliable. According to the Director of the Office of Marine Pollution Prevention, it came as a surprise to the Icelandic team that the contractor decided to try to recover the oil from the ship with special pumps. However, since they had already been ordered and were on the way to Iceland and because connecting steam pipes to the tanks was considered to be a complicated task, the decision was made to see if the existing equipment could handle the cold heavy fuel oil (Egilson, 1997). The heavy fuel oil turned out to be too viscid for it to be pumped and it was obvious that it needed to be heated in order for it to be pumped.

Measures were taken to use a car with water heating equipment to heat the oil as well as the lubricating oil and the diesel oil, while waiting for the steam boiler from the machine shop Velsmidja Orms & Viglundar. On March 15 the steam boiler arrived at the stranding site but turned out to be insufficient for the operations. Measures were therefore taken to obtain satisfactory equipment (larger steam boilers) from the Netherlands. On March 20 the imported steam boilers were installed, so that the pumping of the heavy fuel oil could begin.

The Icelandic government had declared its concern on how slow the pumping of the oil from the ship was going, and their main cause of concern was the delay in obtaining the appropriate heating equipment so the oil could be pumped. For this reason the representative of the Vikartindur insurance company sent a letter to the EFAI, dated April 7, reporting the current state of affairs and the reasons behind the delay. The letter exclaimed that the contracting firm felt it was capable of pumping the heavy fuel oil from the ship with special pumps, without having to heat the oil first. It later became evident that it was necessary to heat the heavy fuel oil. The underestimated need for steam boilers from abroad caused about a week delay in pumping the oil.

On March 24, the weather conditions turned adverse at the stranding site causing all salvage operations to a halt for several days. Because of the storm, some of the equipment used in the salvage operations was severely damaged and the connecting cable that was set up between the shore and the ship was broken. More oil was then apparent in the vicinity of the ship, and cargo saturated in oil started drifting to the shore. This was mostly near the ship, but the jetsam reached all the way to the coast of Stokkseyri. On March 25, it was discovered that one of the hatches had disappeared and so the sea could easily reach the cargo in the hold and oil was floating there.

Pumping of the heavy fuel oil and the oil from the ship's tanks resumed on March 28. Oil was recovered from the engine room, but since it was open to the sea and oil was constantly floated in. Thus, it was necessary to clean it over and over again. Finally all of the tanks in the ship were opened, emptied and cleaned.

### *3.6.2 Cargo needs to be salvaged*

The municipality was responsible for the inspection concerning the salvage operations of the cargo and the cleanup of debris. The representative of the insurance agency made the decision to put out the rescue of the ship and its cargo for tender. The Director for the Office of the Marine Environmental Protection supported this decision, as it was his opinion that this would provide the time needed to further elaborate on the different ways for the rescue operations.

During the storm on March 24, several containers fell overboard from the deck, one of which opened. In this container were various drugs, and packages and small glass containers spread all over the beach. The Sudurland Public Health Authority and the Djupar Municipality demanded in a letter to the representative of Vikartindur's shipping company and insurance agency that they immediately begin the actual salvage and cleanup operations, without any further delay. As mentioned earlier, a collateral of ISK 50 million was also required to guarantee the fulfillment of the contract.

### *3.6.3 How to clean the shore?*

An estimated one hundred containers were torn completely open, and their contents were spread over the entire coast in Thykkvibaer and far inland half buried in the sand. The Sudurland Public Health Authority supervised most of the clean-up operations, but during the initial operations the SAR teams from the entire area from Thorlakshöfn to Kirkjubaejarklaustur had come to assist in the salvaging operations. The coastline was carefully searched for hazardous substances. In the opinion of the representative of the Sudurland Public Health Authority, the cleanup of the coastline would have been more successful if they had controlled the entire project. The operations were only delayed once when the police prohibited activities on grounds of "the poor weather and dangerous cargo." Their assessment of the weather was valid, to a certain degree, but the "dangerous cargo" turned out to be large sacks with dried red pepper powder, that burst up in a red cloud of dust when the breakers took them overboard and the containers cracked. Had they been permitted to respond immediately, without delay when the substances went overboard, this would not have resulted in the drifting those substances all over the southern coast. Later, there was cooperation with the individuals hired by the Sudurland Public Health Authority to assist in the operations, and the clean-up operations were put up for tender by the insurance agency (P&I).

On March 14, work started on collecting the largest components on the coast and containers that had drifted ashore were all gathered in one place. Oily containers that had drifted to the coast were cleaned on the shore. On this same day the Committee for the Prevention and Response on Acute Marine Pollution, one of the representatives of the owner's insurance agency, the EFAI staff, and the Director of the Civil Defense flew over the stranding site. No oil was visible on the surface of the sea but a considerable amount of debris was drifting around the vessel.

A dispute between the owners and the leaseholder of Vikartindur, regarding the handling of the cargo and the postponements made by the owners, caused additional delays in cleaning the shore.

### *3.6.4 Debris*

According to law, the Communal Council of Djupar and the Sudurland Public Health Authority had the obligation to intervene to make sure that the coastal line was properly cleaned up. The involved parties did not want to start the actual clean-up operations until a written collateral had been guaranteed to the effect that they would be reimbursed for all costs needed to execute the necessary operations. There were several options available in the legislation that allowed the local community to intervene in clean-up operations. The Ministry for the Environment, on the other hand, was of the opinion that the best option was that the owners of the vessel and its insurance agency manage the cleanup and carry the cost thereof.

The coast was initially only roughly cleaned. Previous experience with comparable work still unsettled was one of the reasons that the rescue teams did not start the cleanup until payments had been secured. For this reason, the EFAI signed an agreement with the rescue teams on April 4, regarding the cleanup of the oil-contaminated debris and the disposal of it. In this agreement, the EFAI secured payments for the cleanup in case the insurance agency would not pay within a set time limit.

### *3.6.5 Dangerous cargo*

Since the ship was sailing to Reykjavik after having visited various European ports, it was thought probable that dangerous cargo could be on board, according to the IMO definition (IMDG – Code). On March 6, the Division of Hazardous Chemicals of EFAI was asked to review the “Dangerous cargo list” of Vikartindur in order to check what dangerous cargo was on board. It was given a list on the categorization of the substances on board according to contents, amount and the appropriate way to handle this cargo. The results of this review were that there was only one dangerous substance and it would only cause a risk in the event the packaging broke. The police in Hvolsvöllur, which had jurisdiction over the stranding site and had been taking shifts to guard the site, were notified of this, as well as the representative of Vikartindur’s insurance agency.

Since several containers had fallen overboard because of the storm, the decision was made that when and if the container with the most dangerous substances fell overboard, the police would evacuate the area and seal it off completely for approximately one hour. It was not considered necessary to have a team of specialists present. Rather the Hvolsvöllur police would adhere to the safety guidelines regarding the handling of the dangerous cargo.

The night before March 10, this container fell overboard without the knowledge of the men on duty guarding the stranding site. The container was completely destroyed, and its content spread over the coastline. The Sudurland Public Health Authority took decisive action in collecting this jetsam, since they were responsible for the collecting and disposal of such substances.

### *3.6.6 Drifting Oil*

On March 22 with the consent of the insurance agency, the EFAI Office of Marine Environment Protection made an agreement with the SAR teams in the area regarding collecting

those objects polluted by the oil, including the oil-saturated kelp drifting to shore. An organized cleanup of the beach started on March 24.

On March 25, it was apparent that an increasing amount of oil had started appearing by the vessel. Cargo saturated with oil was also discovered drifting ashore, and had spread along the coastline due to the bad storm the day before. There was also a considerable amount of oil in the kelp on the coastline. Because of the possible risk this presented, both to the environment and the birds in this area, the EFAI contacted both the Communal Council of Stokkseyrarhreppur and the Museum of Natural History requesting an assessment of the situation.

By walking along the coastline and flying over the site, the Museum of Natural History checked the extent of oil pollution and its effect on the birds in the area. The on-scene investigation took four days, and according to the Museum's assessment report there were instances of oil-covered birds. There were also proposals regarding the clean-up operations. It was also stated that the area would be kept under further surveillance with regard to changes in the bird life, as well as possible pollution.

## *4 Aftermath*

### 4.1 RESCUE OPERATIONS

On April 6 the Environmental and Food Agency of Iceland finished their main duties at the stranding site. The danger of oil pollution had passed but the shipwreck still remained to be removed and the shore needed to be cleaned up. Rubbish was spread all over the Thykkvibaer coastline and it was obvious that extensive cleaning still needed to be done. Thus, these conditions served to maintain the irritation that had developed with the public and the media, resulting in harsh criticism of how slowly the cleanup measures were progressing. On April 8, the Ministry for the Environment released an announcement in an effort to try to answer the questions that had been most prominent in the discussions: who was responsible for the site of the stranding, whether the authorities should have intervened in the cleanup measures, and how the environment had been damaged as a result of the stranding.

Vikartindur's insurance company invited bids for the cleanup. According to the representative of the salvaging company (Skipataekni) that took on the project, the postponement of the clean-up operations were partly caused by the delay in finding a subcontractor to take care of the cleanup. When a subcontractor had been found a contract needed to be finalized on how to handle the operations (Morgunbladid, 26 March 1997). Finally, a subcontractor was found for the job and a systematic cleanup began during the weekend on April 19–20, a month and a half after the stranding.

Most of the oil was recovered from the ship and transported away from the site. According to Table 4–1 more than 400,000 liters (ca. four hundred tons) were successfully recovered, which was over ninety-five percent of the oil estimated to be on board the ship. Yet, there are two factors which seriously affected the amount of oil actually pumped from the ship. One is that the initial amount of oil on board was only an estimate; the other is that the recovered oil was partially mixed with water. Since the machine journal of the ship was never recovered, it is only possible to make reference to the estimated initial amount of oil as stated before.



*Table 4–1. Estimated and restored amount of oil*

<b>Oil type</b>	<b>Estimated initial amount (Liters)</b>	<b>Amount pumped from tanks (Liters)</b>	<b>Difference</b>
Heavy fuel oil	371 000	344 900	26 100
Diesel oil	20 000	16 000	4 000
Lubricating oil	37 000	29 000	8 000
Residual oil	0	12 500	–12 500
<b>TOTAL</b>	<b>428 000</b>	<b>402 400</b>	<b>25 600</b>

(Source: Egilson, 1997)

The Sudurland Public Health Authority saw to collecting the oil cargo. The pollutants were collected and put into a special container which was taken to a reception site for pollutants in the Reykjavik area. All cargo that was relatively undamaged was also sent there. On May 3–4 the second session in the cleanup was conducted, and all oil polluted rubbish was taken and destroyed at an appropriate landfill with approved methods in accordance with the requests made by the Office of Pollution Prevention and the Sudurland Public Health Authority.

The Government continued to put pressure on the ship's operators to finish the work on salvaging and removing the vessel from the Hafsfjara shore. The operators made an agreement with Titan Maritime Industries Inc. which included detailed provisions on the removal of the shipwreck, the cleanup and the revegetation of the shores in the area. The District Magistrate of the Rangarvalla County affirmed the agreement on the salvage operations and it was signed by all parties concerned on May 30. There were primarily two issues in this agreement pertaining to the environmental authorities. Firstly, the owners of the vessel affirmed that they would make sure the shipwreck was taken apart and removed from the Hafsfjara shore to the extent it was technically feasible. The owners of the vessel would cover all costs of removing the wreck; this work was completed towards the end of the summer in 1997. Secondly, the owners declared that they would compensate for the damage done to the local vegetation and roads resulting from traffic connected to the cleanup operations.

A contract was made with a foreign company on the removal of the wreck from the stranding site. The demolition began after most of the cargo and the substances thought to be environmentally dangerous had been salvaged. The ship was taken apart and removed piece by piece, except for the undermost part of the keel that was about to disappear into the sea and the sand.

The Chairman of the Djupar District Council expressed himself forcefully, saying that the methods used in the clean-up operations had been “disgraceful and in fact the work had never fully been completed.” The representative of the Sudurland Public Health Authority, on the other hand, declared that he was satisfied with the cleanup. The Environmental and Food Agency was charged with the assessment of the cleanup operations, subsequent to which the Director pointed out that the rubbish buried in the sand kept on appearing after the cleanup. On the whole, though, he considered that the cleanup operations were acceptable.

On June 14, 1998, more than 15 months after the stranding, representatives of the Sudurland Public Health Authority went to the site together with the vessel's solicitor, an agent

of the vessel's insurance company, and representatives from the environmental division of the Djupar rural district. Workers were still working on completing the cleanup. Rubbish and small items from the vessel were still spread over an area of approximately two hectares and the remainder of a fence and its wires were apparent. On May 19, 1999, a final appraisal was done of the site of the stranding and it was concluded that the cleanup had been successful. There were no visible items left from the ship and the items that could not be removed would eventually get buried in the sand.

#### 4.2 CARGO

There was an extensive amount of work to be completed by the Office of the District Magistrate of Rangarvalla County when it came to solving the dispute on salvaging the cargo, the liabilities that the cargo owners were required to obtain in order to have the goods handed back over to them, and the auction of unclaimed cargo. The customs department oversaw the handling of unclaimed cargo, but in accordance with the customs law, one year had to pass from the stranding before the unclaimed cargo could be put up for auction. An auction by the customs department took place on June 18, 1998 and its proceeds went to pay the import duties and custom costs. Due to delays, a part of the cargo was not put up for auction until May 15, 1999.

The District Magistrate expressed his discontent with the delay in dealing with and solving these issues, which in 2002 resulted in the District Court of Reykjavik's rejection of the claims made by the Office of the District Magistrate against Vikartindur's insurance company for the payment of outstanding costs. The amount in question was not large relative to the total cost of the stranding.

### *5 Thematic Analysis*

#### 5.1 DECISION MAKING UNITS

In the administration of democratic states, an emphasis is put on the explicitness with regard to who is responsible for decision-making. A distinction is made between those who work on making certain decisions, on the one hand, and those who are responsible for the decisions that follow, on the other. In reality, it often proves to be difficult to maintain this distinction. For instance when responding to a crisis, cooperation between various groups becomes closer, the tasks overlap, and hence, the boundaries between roles become fuzzy (Sundelius, Stern and Bynander, 1997). In response to the stranding of Vikartindur, the problem was that the division of responsibility was not clear at the beginning because of unclear legislation.

The managing of the Vikartindur crisis is analyzed from the Icelandic administration's point of view. Therefore the parties within the administration which actively participated will be examined. This review does not include the foreign decision makers connected to the stranding, with the exception of the captain.

The Icelandic Maritime Administration Act is based on the principle that the captain has ultimate decision making power and command of his vessel. This also includes assistance sought in the event of danger at sea. This is in accordance with ancient and international regimes on sea fare (Icelandic Maritime Administration Act No 34/1985). Thus the captain

was clearly responsible for whether and when he would request assistance for Vikartindur. What governed or influenced his decisions was to be the matter of reflection for a number of people, as was evident from the media, Parliament and public discussions. There were many who doubted the captain's actual power to make such decisions, given the fact that he was under pressure from the owners and the insurance companies. During the maritime inquiries, the captain revealed that he was in constant contact with the shipping company, but that it was his decision to ask for assistance.

It is worthwhile to look at the nature of the interaction between the captain and the crew in the decision-making process while the danger escalated? As described earlier, the stevedore supervisor of the ship encouraged the captain to ask for assistance as early as in the morning. The stevedore supervisor was the Eimskip representative and therefore, metaphorically speaking "not in the same boat" as the others who were employed by the shipping company. He expressed his concern directly to the Eimskip personnel, thus initiating the process among the responding parties. By reviewing the maritime inquiries it became clear that the chief engineer was the closest one to the captain in the decision-making process, which is normal considering the fact that the engine failure initially caused the crisis. Thus, the captain needed to rely on the expert opinion of the chief engineer. Yet, the report of the Marine Accident Investigation Committee in Hamburg (January 26, 1999) disclosed that a mistake made by the chief engineer had partly caused the stranding of the vessel. The chief engineer was of the opinion, as was the captain, that there was every possibility to get the vessel afloat up until about 19:00. The actions and words of the engineer supported and/or encouraged the captain's decision.

### *5.1.1 Interaction between the Icelandic Coastal Guard and Eimskip*

Eimskip is the party that notified the Icelandic Coast Guard (ICG) of Vikartindur's engine failure. The company thus initiated the administrative process for the impending danger and later the stranding of Vikartindur. Hence the company and the Icelandic administration became active decision makers in assessing the need for a possible rescue operation. During the decision-making process of the ICG, the decision to encourage the captain of Vikartindur to accept assistance was repeatedly made. As long as he refused, their hands were tied and they were unable to intervene.

Because of the nature of the matter, the ICG withdrew from the case after the stranding, while the Eimskip representatives domineeringly engaged themselves in the response at immediately after the stranding incident. In fact, they took the initiative without having the legal authority to do so.

The Vice Chairman of the Committee for the Prevention and Response on Acute Marine Pollution was alone in making the decision not to convene the committee after the stranding of Vikartindur. Did he have full authority to make this decision as the Chairman at that time? It should be noted that he did say he would convene the committee if any of its members had requested one.

### 5.1.2 Coordination after the stranding

As already stated, it was clear that the structure of the administration was such that the executive power regarding vessel strandings was decentralized. According to a theoretical definition, this structure belongs to the so called “coordination model,” which constitutes a decentralized system. The concept behind such a model is, among other things, that the decentralized administrative units are present when solving a problem, but they do not constitute a hindrance. An emergency situation requires both a decentralized and a complicated decision-making process; therefore rather than trying to apply a centralized decision-making process to solve the problem, the decisions made by the independent decision-makers should be supported (Rosenthal and Kouzmin, 1993). Table 3 shows the public bodies that participated in the decision-making process in connection with the stranding of *Vikartindur* and the tasks that were obligated to be carried out according to the law. In addition, the particular tasks and roles of the decision makers are discussed in the following sections.

Task	Decision-maker
Oil recovery/dangerous cargo (IMDG)	The Environmental and Food Agency
Salvaging the vessel and its cargo, and general law enforcement	The County Magistrate in Hvalsvöllur
Cleanup of debris/dangerous goods as debris along the coastline	Hella Public Health Committee / Sudurland Public Health Authority <sup>5</sup>
Removal of the wreck	Djupar Communal Council

#### 5.1.2.1 The Environmental and Food Agency in Iceland (EFAI)

Following the stranding on March 5, the Director of the Office of Marine Environmental Protection made the decision to call the ICG in order to obtain additional information about the amount of oil and other dangerous substances on board the *Vikartindur*. This was the first step taken in the decision-making process by the Director on behalf of EFAI. He also took the initiative to send interested parties from the public sector to a project meeting at the scene of the stranding in order to assess the situation, as well as to organize further action and response to the possible risk of pollution. An employee from the Office of Marine Environmental Protection arrived to the scene the next day. His opinion was often sought for such operations and he shared his experience regarding equipment and other resources available in the country. He could be described as the closest thing to an informal on-site commander of operations on the coast. He was in constant contact with the Director of the Office of Marine Environmental Protection.

Since the owner of the ship had given a declaration stating that he would assume the responsibility of recovering the oil and dangerous substances from the stranding site, the execution of the cleanup was taken over by specialists hired by the owner to carry out this work.

<sup>5</sup> The Public Health Committee in Hella has 3 representatives and is one of nine Sudurland Public Health Authority committees.

Therefore the EFAI staff did not dominant in solving this task, although they did monitor the entire execution of the operation and had a good understanding of the situation.

### **5.1.2.2 The County Magistrate in Hvolsvöllur**

When the stranding occurred, the vessel and its cargo became the responsibility of the magistrate who was also the county chief of police. He was active in ensuring that the responsible parties paid for all of the costs associated with the salvage operations, including the cost of law enforcement. He considered the statement of intent completely insufficient, pointing out that the cargo aboard the vessel would be the responsibility of the chief of police until collateral had been provided. He sent a letter to the Minister of Justice and the Minister for the Environment on March 14, where he supported his opinion with reference to the law. The chief of police thus becomes active in the decision-making process by making clear the division of responsibility among those who participated in the operations.

According to the law on stranded ships and flotsam, the Icelandic government is no longer responsible for the execution of the salvaging after the owner has taken over the task. Even so, they may be required to fulfill various other obligations, such as maintaining law and order at the stranding site (Orlygsson, 1997). The chief of police had to intervene by enforcing the law: operations were prohibited when it was considered dangerous (because of bad weather or the risk for spreading hazardous goods), the contents of containers needed to be brought in for customs inspection, and trespassing was prohibited on the site.

### **5.1.2.3 The Sudurland Public Health Authority**

The representative for the Sudurland Public Health Authority supervised most of the clean-up operations after the stranding. He was in cooperation with the SAR teams and individuals until tenders for the clean-up project were accepted by Vikartindur's insurance agency. He participated in the operations until the cleanup was completed.

### **5.1.2.4 The Djupar Communal Council**

The community had a claim with respect to the cleanup of the coast, but did not act in any formal way during the clean-up process, except to approve that it had been completed. It was beyond the ability of this small community to take on the full responsibility of the stranding site.

## *5.1.3 Complex cooperation*

After the stranding occurred a number of parties participated in the decision-making process on behalf of the Icelandic administration, the SAR teams, Eimskip and the vessel's owners. An extremely complicated coalition of autonomous actors was initiated because of the ambiguity in the division of tasks, as well as the ambiguous legal environment. The domestic parties needed to sit down and "scrutinize the law and regulations" as one person said in an interview. Interaction with the foreign parties required even more intricate coordination. At



first there was chaos, then consultation with the Icelandic parties followed by written statements and joint meetings with the foreign parties.

It is worth noting that the interaction between the Icelandic and the foreign experts seemed to be free of conflict. As described above, the Icelandic response team did question the decision to pump the heavy fuel oil, since they were of the opinion that it was too viscid for pumping. Despite this, no conflict arose because of this decision. This is a good example of the difficulty in the need to rely on specialists and later on accept criticism of their work from the public and the media. The turmoil could have created a conflict and accusations from both parties, but this, however, did not turn out to be the case. The Director of the Office of Marine Pollution Prevention, the Director of the Office of Marine Environmental Protection described the cooperation of these parties as follows:

The measures regarding the salvaging of valuables and environmental preventive action after the stranding of the *Vikartindur* were remarkably successful considering the initial conditions. Many interrelated factors contributed to this outcome, such as the desire to cooperate both by the owners and the public parties, logical decisions and more favorable weather conditions as the days passed. It is only fair to emphasize the part the representative of the insurance company played in regards to the salvaging work, as well as the insurance company, which both showed great responsibility and honored every legal obligation. The Icelandic nation might not be as fortunate when the next stranding occurs (Egilson, 1997).

Certainly, the Icelandic nation was fortunate in regard to how well the foreign parties followed through on their obligations. But thanks also to the Icelandic experts who certainly did their part to make the cooperation with the foreign ones a happy one, amidst stormy critical discussion about the actions in which they were involved.

#### *5.1.4 The Government's approach*

Discussions concerning the stranding of *Vikartindur* soon became very prominent in the Parliament. The Government participated in these discussions but did not intervene in the on-site operations. The decision was made to entrust public bodies with particular tasks, and to trust the guarantees made by the owner of *Vikartindur*, thus not sparing him the responsibility by intervening in the matter. The authorities in the West Fjords took a similar stance regarding the rescue operations after the 1995 avalanches (Bernhardsdottir, 2001). Unlike then, a great deal of pressure was put on the Government to intervene in the operations concerning the stranding of *Vikartindur*. Yet this did not need an elaborate discussion; the decision was unanimous and despite public pressure the Government did not waver from it.

Yet this is not always the case. Sometimes it can be unwise for the authorities not to intervene in an operation. Evidence of this is found in the CRiSMART case bank in the research conducted on the City of Auckland's response to a power failure in New Zealand in 1998 (Newlove, Stern and Svedin, 2000). The inhabitants of the city had to endure a long period of electricity failure, which paralyzed businesses and institutions for more than two months. The problems escalated for all those who had to put up with these circumstances, and pressure was put on the civil authorities as well as the power company Mercury Energy to find a satisfactory solution to the problem. Soon in the response process, the Mayor of Auckland decided to support the measures taken by the power company; he and his advisers

felt that Mercury Energy was responsible for the crisis and should therefore provide a solution. By doing so, they shunned public opinion and the political pressure put on the Mayor to behave like a political leader. The Mayor made statements to the effect that the company's representatives were doing everything within their power to solve the problem, although this solution was by no means a successful one. A number of people were of the opinion that the reason he lost his reelection campaign later that year was because he had too closely associated his face and credibility to Mercury Energy.

Another example from a study found in the CRiSMART case bank illustrates a case in which the authorities gave in to such pressure. During the building of a train tunnel in Båstad on the west coast of Sweden in 1997, soil water was contaminated with hazardous substances used by the building contractor. Through the consumption of this water fish died, cows were paralyzed and the health of the local human population was seriously threatened. The media, the local residents and the local authorities demanded that the Government intervene. The Government responded by forming a group comprised of representatives from the Ministries of Finance, Agriculture, Transport and Communication, Defense, and the Environment as well as the head of legal affairs and a number of chemists. The State Secretary led the group. During the acute stage, this group convened daily. In the conclusion of the investigation, it was pointed out that intervention was not necessary but rather the authorities had felt compelled to give in to public pressure (Kärde, 1998).

As already mentioned, there are primarily two ministries that have statutory obligations with regard to the stranding of a vessel, i.e. the Ministry of Justice and the Ministry for the Environment.<sup>6</sup> It is worth reflecting further on how invisible the Minister of Justice was in the whole process. The Minister for the Environment appeared alone in the line of fire and he became a personification of a kind for all the supposed mistakes during the salvaging operations. Even though he was not one of the decision makers, it is fair to say that he had a certain role as a moral leader. Interviews in connection with this research revealed that criticism from the opposition parties were aimed at the Minister and created a negative tone in the discussions. The question also needs to be asked whether the Minister consciously or unconsciously assumed this position and/or whether the media actively made negative connotations.<sup>7</sup> The Minister for the Environment described vividly how he experienced this aggravation:

I experienced this as if the ship had run aground in my own backyard and the responsibility of her was solely mine. It was my duty to remove her from there and solve all problems related to the incident (Bjarnason, 3 May 2002 e-mail interview).

In looking for an explanation for the reasons why the Ministry for the Environment received most of the flak while the other ministries simply withdrew, one could consider the fact that the Ministry for the Environment was relatively new. Prior to this, six other ministries dealt with such issues, as stated in the introduction of this chapter. The Vikartindur stranding was the first major incident that the new ministry was called on to deal with and a certain degree of inexperience was present, which was apparent considering the way the ministry initially handled the crisis. The ministry was not mainly concerned with the technical side of the matter (that is, the first stage of the crisis), but rather with how to react to the political opposition

---

<sup>6</sup> See section 2.1 Administration and Communication Channels

<sup>7</sup> See section 5.3 Information Management and Media Relations

and the debates in the media (that is, the second stage) thus defending the credibility of the young ministry.

## 5.2 VALUE CONFLICTS

A conflict was quite obvious between the captain of *Vikartindur*, on the one hand, and the ICG and Eimskip, on the other, while the vessel was drifting to shore. After the stranding, the enormous uncertainty as to the division of responsibility was bound to create various conflicts. Eimskip and the owners of the vessel disagreed. The magistrate of Rangarvalla County claimed that Eimskip and its insurance agency were responsible for compensating all costs associated with the salvaging operations. Eimskip referred such discussions to the shipping company and claimed that this was their responsibility.

Subsequent to the stranding, the value conflicts took various forms and it is of interest to describe six of those: entitlement of intervention, salvage fund, the war of the flags of convenience, protection of the carriers' interests, local disputes, and a political bone of contention.

### *5.2.1 Entitlement of intervention*

According to the Director of the ICG, the stranding of *Vikartindur* served to prove that legal changes were needed in order to increase the power and the initiative of the ICG with regard to vessels in danger in territorial waters (a 12 mile limit) and at the supreme will of the captain. The President of the National Life-Saving Association of Iceland, the Headmaster of the Marine Rescue School, and the Director of the Federation of the Icelandic Seamen's Union were among those who supported the Director of the ICG. This was an important preventive measure primarily for the workers on board such vessels and had the potential to decrease or even eliminate serious pollution.

On March 11, a fairly long discussion on the *Vikartindur* stranding took place in the Parliament where the Prime Minister accepted the task of answering several questions directed to the Government. One of the questions concerned how the Icelandic government (i.e. the Minister of Justice, or the Icelandic Coast Guard) might be guaranteed a reasonable right to intervene in the event that a vessel's superior repeatedly rejects the advice of the authorities regarding an impending danger, risking the lives of a number of people. In his reply, the Prime Minister said that changes in the Maritime Act were necessary to make it possible to overrule the decision of a captain. But such a change would have to be in accordance with Icelandic international obligations and might be difficult due to the prevailing attitudes in favor of the captain's authority.

#### **5.2.1.1 Intervention at sea**

Icelandic legislation does not authorize the intervention of authorities even if a vessel threatens the marine environment in Icelandic waters. It is worth noting that Iceland's right to intervene extends outside the territorial waters according to the international agreement "Intervention" from 1969<sup>8</sup>, which was adopted by Act No. 14/1979 and provides for the following:

---

<sup>8</sup> International Convention Relating to the Intervention on the High Seas in Cases of Oil Pollution Casualties.

Parties to the present Convention may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following a maritime casualty or acts related to such a casualty, which may reasonably be expected to result in major harmful consequences (Act No. 14/1979).

There are also provisions for intervening outside of territorial water within the United Nations Convention on the Law of the Sea, Article 221, “Measures to Avoid Pollution Arising from Maritime Casualties”:

1. “Nothing in this part shall prejudice the right of States, pursuant to international law, both customary and conventional, to take and enforce measures beyond the territorial sea proportionate to the actual or threatened damage to protect their coastline or related interests, including fishing, from pollution or threat of pollution following a maritime casualty or acts relating to such casualty, which may reasonably be expected to result in major harmful consequences.”
2. “For the purposes of this article, ‘maritime casualty’ means a collision of vessels, stranding, other incidents of navigation, other occurrences on board a vessel, or external to it resulting in material damage or imminent threat of material damage to a vessel or cargo.”

The States Parties to this Convention can also require foreign ships to use sea lanes and traffic separation schemes in order to regulate the passage of ships as explained in detail in Article 22: “Sea Lanes and Traffic Separation Schemes in the Territorial Sea” and in Article 194: “Measures to Prevent, Reduce and Control Pollution of the Marine Environment.”

In addition, the following is stated in the International Convention on Salvage (1989) in Article 9 – Rights of Coastal States:

Nothing in this Convention shall affect the right of the coastal State concerned to take measures in accordance with generally recognized principles of international law to protect its coastline or related interests from pollution or the threat of pollution following a maritime casualty or acts relating to such a casualty which may reasonably be expected to result in major harmful consequences, including the right of a coastal State to give directions in relation to salvage operations.

It is apparent that coastal States have the authority to protect their sovereign rights within their respective territorial seas and hence set specific provisions for intervening in an effort to protect their coastlines. But the Government of Icelandic has not yet ratified the International Convention on Salvage or initiated legal provisions for intervening within the territorial sea of Iceland. Other states have in their legislation the right to intervene within their territorial waters. An example is the Government of France; its Parliament responded immediately after the stranding of Amoco Cadiz on March 19, 1978, by establishing regulations regarding passage restrictions and permission to intervene when a possible threat of pollution arises within its territorial sea.

### **5.2.1.2 Intervention on land**

The claim that the Government should intervene in the salvaging and cleanup of the stranding caused a great deal of turbulence. According to the interpretation of Thorgeir Orlygsson (professor of law), the state authority must be capable of intervening in the course of action

if the party to the salvage operations does not attend to its duties. The question here concerns what kinds of incidents are needed to justify such intervention. Implicit in the loud criticism on the slow progress and the mistakes in the clean-up operations, there was a general opinion that the Government had a good enough reason to intervene in these activities. In particular, it annoyed the public that the progress was slow and delayed due to the foreign parties' control of the situation. The editor of the newspaper *Dagbladid* depicted this irritation in a strong way in his editorial:

...the case is being handled in the same way it would be done under similar circumstances in the countries of the third world. The members of the local government scratch their heads, while specialists from the Western powers arrive on the scene, if and when they have the time, and invite tenders for the salvage operations in order to find out who bids the lowest (*Dagbladid*, 11 March 1997)

The Ministry for the Environment was primarily in the limelight of the criticism directed toward the Government for deciding not to intervene in the rescue and cleaning operations when the progress appeared to be moving slowly, even though the formal responsibility of such a decision was shared with other ministries. Section 4.3.2 on media relations explores the reasons behind this particular focus and criticism on the Ministry for the Environment.

There was also a similar precedent for government intervention when the *Erik Boye* ship stranded in 1993 and the owners of the vessel did not make any rescue or clean-up attempts for several days. It became apparent that an environmental accident was imminent if nothing was done soon. Thus the Icelandic government intervened but never received payment for its rescue and clean-up expenses. Based on this previous experience, it was perhaps natural that the Government decided not to intervene in the *Vikartindur* operations, but rather to put pressure on the owners to comply with Icelandic law and fulfill their declaration of content for the cleanup costs.

### *5.2.2 The salvage fund*

An insistent question, which was often put forth before the stranding of *Vikartindur*, concerned whether the salvage fund stood in the way of requesting for assistance. This question became very prominent after the *Vikartindur* stranding. There was criticism claiming that the salvage fund served to decrease the safety of seafarers since there was a reluctance to request assistance.

In the understanding of the law, there are two salvage stages at sea: so-called assistance or actual salvage. Many argue that the court of justice would have considered the *Vikartindur* case an actual salvage had the ship been rescued in time. In such instances, the shipping company and the crew of the salvaged ship have the legal right to receive a salvage fund; this would have been the subject of an agreement or the case would have been referred to the court. This drew attention to whether the shipping company and the captain had taken too great a risk by trying to fix the engine in order to avoid paying a costly salvage fund or an even higher insurance premium.

The salvage fund is not characterized by the amount paid for the work performed. Instead the salvage fund is a percentage of the value of the vessel and cargo (often in the range of one to ten percent of the total value) and depends on among other things how much danger the salvaged ship was in. If the vessel is insured, its insurance company pays the salvage



fund. If the ship is not insured, the shipping company must pay the salvage fund. Generally, the salvage fund means multiple paybacks compared to the work performed (Thorlaksson, 1997).

It is estimated that the value of Vikartindur and its cargo was approximately ISK 1700 million which means that the salvage fund would have been in the range ISK 34–170 million (Dagbladid, 7 March 1997). According to solicitor Valgardur Briem, it is difficult to estimate the salvage fund the coastal guard vessel and its crew would have received if the captain of Vikartindur had asked for assistance earlier and the rescue operation would have been successful. There is so-called “lesser assistance,” where the salvage fund amounts to two percent of the value of the ship and cargo. Therefore, it is difficult to determine the reference percentage, although it never would have exceeded ten percent (ISK 170 million).

The maritime inquiries revealed that the shipping company had been in regular contact with the captain of Vikartindur, as well as Eimskip. The captain reported that the shipping company had told him that since the conditions were favorable, he should not make any deals with the coast guard. He had not made any deals himself, but it would have of course been in his power to ask for assistance had he considered this necessary.

Another issue discussed in the aftermath was whether the ICG should have made a deal using coercion so that the ship could have been rescued in time. The shipping company had tried to make an agreement with the ICG about a fixed price for the rescue operation. The ICG Director had not considered this feasible, as it was contrary to the maritime legislation and such agreements were not considered valid. He pointed out that the ICG had always made an agreement about the salvage fund afterwards; the involved parties were able to settle the matter themselves and there had never been a need to go court with a case. This was based on the misunderstanding that such agreements were against maritime legislation as provisions within this legislation state that such agreements can be revoked if the agreement is judged unfair (Icelandic Maritime Administration, Act No 34/1985: Article 167).

When making reports in connection with the maritime inquiries, it was revealed that the shipping company considered Eimskip a government owned company. Based on that assumption, it was thought possible that the shipping company could make an agreement with the ICG as a public body.

It is quite common abroad that salvage companies make an agreement before they set out on a salvaging mission. On the basis of this, it is not completely unreasonable that the shipping company tried to make an agreement. Icelandic legislation follows the Scandinavian Maritime Law closely, where warnings are made with regard to such agreements. Moral perspectives govern this; they should not be trying to strike a bargain when the danger is escalating.

### 5.2.3 “*The war of the flags of convenience*”

In the aftermath of the stranding of Vikartindur a conflict of interest arose between Eimskip and the Reykjavik Seamen’s Union in connection with the so-called “War of the Flags of Convenience.” This conflict stemmed from an international conflict between the International Transport Workers’ Federation (ITF) and the International Shipping Federation (ISF) on the one hand and the International Chamber of Shipping (ICS) on the other. The Sea-

men's Association in Reykjavik became a member of ITF in 1923 (Kjaernested, 26 April 2002 e-mail interview).

ITF had criticized ship operators for sailing under the flag of another country than their own in order to evade the laws, regulations, and mandatory taxes and obligations in their own country (International Transport Workers' Federation, 2002)

In order to ensure proper working conditions and rights for seafarers, the trade unions have worked in close cooperation with the International Transport Workers' Federation. Through international means, the members of the ITF try to force shipping operators that use flags of convenience on their ships to respect two ground rules. First, at least the minimum ITF collective agreements should apply for all international merchant sailings (other than liner traffic). Second, the collective agreements made with the relevant seafarer trade unions apply to all liner traffic between countries in Europe. This is based on the assumption that the shipping company which owns, leases or controls the schedule of the merchant vessel is responsible for the collective agreement. This rule is based on an arrangement of the European seafarers union within the ITF and is aimed at creating equal conditions for competition and hindering social dumping. The crews of ships sailing under a flag of convenience often come from the Philippines or from countries of the former Soviet Union (Vinnan, 1998:9).

The International Shipping Federation (ISF) and International Chamber of Shipping (ICS) have not approved ITF as a labor union but do have regular contact with the representatives of the association. The shipping operators are dissatisfied with how ITF unilaterally sets the wage rate and forces them to adhere to this by threats of boycott action by ITF-affiliated dock workers in countries where secondary boycott action continues to be legal, regardless of whether there is a dispute between the shipping company and the crew (International Shipping Federation, 2002).

The Icelandic Seamen's Associations have criticized the policy of the Icelandic shipping lines that sail under flags of convenience and employ foreign crews. At this time there were only 4 of the 26 vessels on the shipping lines sailing under an Icelandic flag. The foreign crews are said to have poor skills at sea and are paid extremely low salaries with very few rights. In this way, the shipping lines can employ more seamen. The stranding of *Vikartindur* served to escalate this conflict.

According to the inspector for Icelandic Seamen's Association, he will never forget the fact that the stranding of the *Vikartindur* occurred just a few days before *Eimskip's* annual meeting. The Reykjavik Seamen's Union was prepared to submit a proposal at the meeting to the effect that the company should abolish its policy of flying a flag of convenience on their ships.<sup>9</sup> When the *Vikartindur* stranded, *Eimskip* representatives called the Board of the Reykjavik Seamen's Union requesting that they withdraw their proposal on account of the accident since the situation as a whole was a very delicate matter. The Board Chairman then replied, "There has often been the need, but now it is essential."

At the meeting the initial proposal was countered with a second proposal from the *Eimskip's* Board. The Reykjavik Seamen's Union made no further comments to *Eimskip's* proposals, since they "had already gained the attention of the media" (Kjaernested, 26 April 2002 e-mail interview). The resolution of the Reykjavik Seamen's Union clearly stated that

---

<sup>9</sup> The Reykjavik Seamen's Union holds a share of IKR 150,000 in *Eimskip* and can therefore submit proposals at the annual company meeting.

by crewing the vessels with foreign seamen, Iceland was losing valuable trade know-how, and this would only reap ignorance, as the stranding of the *Vikartindur* had proven. The words spoken by the headmaster of the College of Navigation in Reykjavik in a newspaper interview are very descriptive of how the skills of foreign crews are doubted:

This case is a reminder that there should be Icelandic officers, both on the bridge and in the engine control room, on liners operated by Icelandic shipping lines: men who know every situation. We live with the ocean around us and it is extremely hazardous. This has made our officers at sea, who sail here constantly, invaluable knowledgeable about the area. I, as well as others, have pointed this out on numerous occasions when it has been said that it does not matter who is in command of the vessels at sea in Icelandic waters (*Althydubladid*, 7 March 1997).

The media pointed out that in the maritime inquiries the captain of *Vikartindur* admitted he had never sailed to Iceland with the *Vikartindur* vessel. Nevertheless, he had sailed the *Vikartindur* since August 1996 (i.e., six months before the stranding). In March 1997 he had held for 16 years a Master Certification, which qualified him to command vessels of unlimited size on routes all over the world. He was among those who inspected the building of the *Vikartindur* and was her captain on her first voyages. So it is by no means fair to say that he, as the captain, was handicapped by his lack of experience.

In reflecting on the discussion about the skills of seafarers, it should be noted that according to Wagenaar (in Harper, 1998) around 70% of the accidents at sea can be traced back to human errors. The Maritime Inquire Committee was given the task of planning how to minimize accidents at sea. In its concluding marks, the committee supported these claims and found that even up to around 80% of the accidents involving Icelandic seafarers can be traced back to human errors. According to the report of the Maritime Inquire Committee, ten Icelandic ships stranded in 1997, one of which was *Vikartindur*, and all of the incidents were caused by human errors.

Although the *Vikartindur* crisis was far from being as serious as the tragic Estonian disaster (when the ferry “*Estonia*” sank in the Baltic Sea in 1994 and more than 850 lives were lost), there were similarities in the attitudes about the “foreign crews.” The Chairman of the Swedish Seamen’s Trade Union stated in the media that the Estonian seamen were less qualified than their Swedish counterparts and they were not qualified to operate a ship as big as the “*Estonia*.” Criticism was largely generated because of the fact that the owners of “*Estonia*” had replaced its well-paid Swedish crew with an Estonian crew with considerably lower wages and claims were made that this deal jeopardized the safety of the passengers (Nowak, 1996). In *Estonia*, the Swedish and Finnish seamen were accused of unfair competition and of using of the ferry disaster to protect their own interests and position on the international labor market at the expense of the Estonians (Lauristin, 1996).

Among those who supported the criticism of the Federation of the Icelandic Seamen’s Union and the headmaster of the College of Navigation in Reykjavik were members of the Icelandic legislative assembly who encouraged Icelanders to stop participating in the war of the flag of convenience. They felt that Iceland should start a fight in the international arena against this doubtful shipping policy, instead of participating in it.

The “treatment” of the *Vikartindur* crew also received much criticism was. For example, the shipping company requested the crewmembers to not speak with the press. The ITF office in London requested that the inspector of the union in Iceland interview the crew in or-

der to make a report. The inspector contacted the party that had employed the men on *Vikartindur* and made a wage contract with them, and he also contacted the shipping company in Hamburg, which gave him permission to meet the men. But before he arrived, the crewmembers were hurried away from the place where they had been staying. The crewmembers were sent abroad at the request of the shipping company, which had asked Eimskip to assist them in getting the men out of the country. The representative of Eimskip contacted the immigration authorities on the morning of March 7, and asked if it was possible to transport the crew out of the country, even if they did not have required documents. The men were flown out of the country that very same day (Althydubladid, 12 March 1997 a).

The Marine Accident Investigation Committee commented on the absence of the crew at the start of the maritime inquiries. One of the managing directors of Eimskip replied that the crewmembers had not been requested to be present at the maritime inquiries, but that four of the crewmembers were still in the area. In the opinion of Stefansson (e-mail interview 20 May 2002), the treatment of the crew was exaggerated. They had been transferred to a local hotel where they were attended to. Understandably the men wanted to return to their home countries, so those who had not been asked for an interview by the Marine Accident Investigation Committee left. He further noted that, considering the life threatening experience the crew had been through, they could not have been expected to wait for the inspector to show up three days after the stranding. Severe criticism was put forth in a discussion at the legislative assembly and one of the members, Gudrun Helgadotti, used the following words to describe the situation:

...there was no great dignity in the solidarity among the seamen across the world when *Vikartindur* went down, as the men were driven to the airport almost with bags over their heads so the press would not see them (Icelandic Parliament, 11 March 1997).

In the opinion of Kjaernested (the inspector of the association), the most decisive factor in pressurizing the shipping companies to make changes in their policy was the negative and prominent discussions in the media on ships flying a flag of convenience. The Eimskip's representatives disagreed with Kjaernested and claimed that over the years changes in agreements had been forced through by striking seamen. A protocol to the Seamen's Union wage agreements of 2000 (valid until 31 December 2003), confirmed the policy and the will of the shipping companies to hire Icelandic crews for ships on scheduled merchant sailings.<sup>10</sup>

Even if today there exists an agreement on crewing the vessels with Icelandic crewmembers, it is severely undermined by the marine transportation of the shipping company *Atlantsskip* which travels to Europe with foreign crews. If the Seamen's Union fails to put an end to this arrangement, the competitive position will change and the large companies may opt for breaking the "agreement" in order to maintain their competitive edge.

This description of 'the flag of convenience' has not been put here to make judgments about who had the 'better' cause (the shipping companies or the seamen), but rather to illustrate the chain reaction and the escalation of conflict in the wake of crisis.

The approach the Icelandic seamen used to put pressure on the shipping companies and force them to change their policy exemplifies Kingdon's model of how policy windows often open during crises, thus creating the opportunity for policy changes. They may open at un-

<sup>10</sup> The usage of a chartered vessel is authorized, for instance, when acquiring a new ship.

foreseen moments; that is, under crisis circumstances as was case when the Vikartindur stranded (Hood, 1998).

#### *5.2.4 Protection of the carriers' interests*

The damage of the cargo on board the Vikartindur was great, and many owners of the cargo did not have insurance. Understandably the carriers felt that their interests were at stake while they waited in complete uncertainty as to what would become of the containers in the chaos at the stranding site. In addition, they expressed their dissatisfaction with regard to the police and the Magistrate's methods of operations on the coast (i.e. preventing people from stealing from the containers, etc.).

At a meeting of the Association of Icelandic Wholesalers and Importers, a conclusion was adopted requesting that the State Prosecutor take action in initiating a public investigation on the salvaging of the cargo after the stranding, and carry out a special examination on the execution of operations and on the carrier's responsibility (the shipping company and the District Magistrate in Rangarvalla County). Strong discontent was evident among the members of the meeting with regard to the handling of the case. At the request of the District Magistrate in Rangarvalla County, the carriers' guarantee for the cost of the salvage was also discussed. The Association of Icelandic Wholesalers and Importers had warned their members against putting up guarantees of this kind without first checking into the matter. They should inspect the condition of their goods in order to avoid future demands for compensation, despite the fact that they had already lost most of their cargo.

#### *5.2.5 Local disputes*

At the growing intrusion of people at the scene, the District Magistrate was forced to prohibit any trespassing on the shores of Thykkvabaer and Hafsfjara, including the landowners. In an announcement from the District Magistrate, it was made clear that the police would turn away anyone who did not have specific business in the area and that they would remove people from the site if they did not leave on their own volition (Morgunbladid, 7 March 1997).

Several of the landowners felt they had the right of ownership to the goods that drifted to shore on their property. On March 14, a little after a week the stranding, the farmer on the Hafur Farm in Thykkvabaer made a claim to all of the goods, which had spread on their stretch of land.

The attorney for the Hafur farmer wrote a letter to the District Magistrate of Rangarvalla County in which he accused several parties of plundering the shore, and the ones leading this action were allegedly "members of the rescue team, a crowd connected to the representative of the Office of Environmental and the Office of Environmental and Public Health South Iceland, and lastly several farmers from the neighboring farms and some tourists" (Sunnlenska, 9 April 1997). Allegedly his client never touched the goods, despite the fact that no one was more rightfully entitled to them than he was. In the letter, the attorney accused the District Magistrate of the Rangarvalla County and the authorities of poor performance in defending the interests of the Hafur farmer. The Office of Environmental and Public Health South Iceland and the rescue teams working for the Office under the command of the Hella



Air Rescue Team considered filing a suit against the attorney for making libel statements (Sunnlenska, 9 April 1997), but nothing ever came of the lawsuit.

On March 30, the Hafur farmer started fencing in his land, an area of approximately 1,500 hectares reaching down to the shore. According to him, the reason for this action was the alleged damage done to the property and various other damages. The day after, the neighboring farmer at the Hali farm claimed that the Hafur farmer had put up the fence on his property, and therefore tore some of it down.

It seems that the disputes among the locals were partly based on the misinterpretation of the Act on Strandings and Jetsam. The farmers presumably thought that the stranding was literally a godsend; a formulation in the old law regarding the stranding of a whale might have caused this confusion.

According to the provisions in Article 28 of the Act on Strandings and Jetsam, when the owner of a ship has not removed a stranded vessel or a shipwreck after two or more years, the Head of the Police shall publish an announcement in the Official Gazette stating that the ship or the shipwreck shall be handed over as lawful property to the person, who, in accordance with Article 25, is eligible to become the new owner of the vessel. This can either be the State Treasury or the owner of the shore in question, all depending on the value of the ship or shipwreck. The above does not apply if the vessel is removed within 9 months after the announcement has been published (Act No. 42/1926 on Strandings and Jetsam).

The stranding of the Vikartindur in no way fulfilled these requirements. The various goods that washed off the vessel and drifted to shore were indeed goods, all of which the District Magistrate was required to bring in for customs inspection.

### *5.2.6 A political bone of contention*

The United Nations conference on the environment and economical development in Stockholm 1972 marked the first occasion on which political leaders participated in a public debate on environmental matters (Solnes, 2001). Since this point in time the policy making of in the western countries has illustrated an ever-increasing emphasis on environmental issues. Public demands for environmental protection have been extremely valuable in directing attention to the many impending dangers, although the public often lacks the technical knowledge and the necessary stamina for maintaining sufficient political pressure to influence the policy making. This is where the role of the elected representative comes in (Heidenheimer, Hecló and Adams, 1990).

In Egilson's report (1997) on the stranding of Vikartindur, he emphasized the following points, inter alia, in an attempt to draw lessons learned from the incident:

The media was rather hasty in their criticism of the operations, or the alleged lack thereof, as they were fairly ignorant of the state of affairs. This created a disturbance in the administration, as the case had become a political bone of contention.... (Egilson, 1997).

On March 11 a parliamentary discussion, which was not on the agenda, on the stranding was held in the Althing (Icelandic Parliament). At this time, the Independence Party and the Progressive Party were the main government parties, and it was a member of the Progressive Par-

ty who initiated these discussions. He directed his questions regarding the stranding of the Vikartindur to the Prime Minister.

Some of the other Parliament Members felt it was inappropriate to discuss the issue of Vikartindur in the Althing before the results from the maritime inquiries were available. The initiator of the discussion replied that the questions he had put forth did not concern maritime law or the interrogation of the crew, but rather that he had presented an objective view by questioning both the legislative work and the legislative role of the Althing, and these were questions the Althing could not avoid answering. The Prime Minister added that he thought it was only normal to discuss these issues in the Althing.

Nevertheless, it was clear that there was an element of risk since the replies were rather superficial. There was the risk that in the heat of the moment the participants in the discussion (the ministers as well as the other members of the Althing) would throw out some imprudent comment or question, to which nothing could be countered. The Prime Minister therefore supported the concerns of the other members and said that it would be sensible to first submit a thorough report to the Althing after the maritime findings were ready. This fragmented discussion in the Althing clearly reflected the concerns about the Vikartindur stranding in society (Icelandic Parliament, 11 March 1997).

The opposition parties were the People's Alliance and the Independents, the Social Democratic Party, and the Women's Party, all of which criticized the response activities to the stranding of the Vikartindur. The views of the opposition parties and the government parties were not clear-cut, as illustrated by the criticism from member of the Independence Party (one of the two government's parties), Kristjan Pálsson. He stated that there was no possible way to defend the late intervention.

The members of the People's Alliance and the Independents were among those who were most ardent critics of the actions taken by the authorities or their alleged lack thereof. The party's representative from South Iceland and Parliament Member Margrét Frimannsdóttir criticized the slow process of the salvage operations and seriously questioned the Minister for the Environment's decision not to convene the Committee for the Prevention and Response on Acute Marine Pollution.

As the time passed, the criticism becomes more specific, and it became more predominant in the media, as is examined in the analysis of the media later in this chapter. Parliament Members Gudrun Helgadóttir and Svavar Gestsson harshly criticized Iceland for participating in the war of flying a flag of convenience. Parliament Member Hjörleifur Guttormsson went as far as to demand the Minister for the Environment to resign. Thus, it is possible to say that the Parliament Members participated in the spiral of disturbance described by Egilson, the Director of the Office of Marine Environmental Protection.

### 5.3 INFORMATION MANAGEMENT AND MEDIA RELATION

Effective management of information is the cornerstone of efficient decision making. When crises occur, valuable time may be lost if important information is lacking or if the information flow is so extensive that it is difficult to discern what is the most relevant (Vertzberger, 1990). In such a situation the response parties must know how information should be processed, and in particular what their specific role is within it. Dissemination of information both to the media and to the public is yet another part of crisis management. This may in-

clude issuing public warnings or easing disturbances, which may create an emergency situation.

### *5.3.1 Information processing*

When Eimskip notified the ICG, the administrative information process was initiated. The NLSA informed the TFV of the vessels and boats in the vicinity of Vikartindur, as well as the SAR teams, and requested that be on alert for the rescue operations. The ICG called out their helicopter unit.

Information was efficiently used in informing and preparing the helicopter crew of TFLIF for the crisis situation. As described earlier, they had assessed the conditions and had prepared the helicopter (which was designed for only fourteen people) in such a way that they were able to rescue the entire crew (nineteen men) in one single trip.

Yet the environmental aspects of the stranding revealed an entirely different situation. The unclear legal framework accessible to the responding parties, and their limited overview thereof, clearly illustrates that the necessary preconditions for sufficient information management did not exist. There was a lack of clear information concerning the roles of the various parties and which communication channels should be used.

When it comes to evaluating the response to an environmental accident, it is evident that the information was fragmented. As was described above, the Director for the Office of Marine Environment Protection contacted the ICG after listening to the evening news, and requested information on the amount of oil and other dangerous substances in the vessel. The question arises then why the ICG had not contacted the Office of Marine Environmental Protection earlier in the day to warn them of the imminent danger of an environmental accident. An agreement existed between the ICG and the EFAI stating how to disseminate information in cases such as this one. This agreement stated that the parties should immediately notify one another when the knowledge of marine pollution outside the jurisdiction of the ports was made known.

### *5.3.2 Media relations*

The media harshly attacked the Government for how slowly the cleanup of the coastline was going and for the lack of action in the matter. This criticism was primarily directed to the Minister for the Environment, the Ministry itself and its institutions. The Minister had a serious confidence problem and was accused of passivity. In addition, reference was made to the parliament discussions where it was maintained that the Minister was not aware of the purpose of the action committee for environmental accidents (Icelandic Parliament, 11 March 1997).

In an article written by the Minister for the Environment published in the daily newspaper Morgunbladid on June 13, 1997, he defended the Icelandic experts working for the Government on matters regarding the stranding:

This was accomplished with the highly favorable results that more than 95% of the oil, or over 400 tons, was recovered, even though the information broadcasted by the media sometimes depicted an image of little or no activity at the stranding site... except for removing of fences and putting them back up again. In addition harsh sta-

tements were made and the television cameras focused on the gigantic vessel looming in the background (Morgunbladid, 13 June 1997).

He then turns to the unfounded accusations made by the media:

Several of the media reporters and some of those they interviewed made strong statements with regard to the cleaning operations after the stranding of Vikartindur. Among them were words such as “muddle,” “scandal” and “failure” that were used unsparingly. It seems as if they have filtered into the public conscience and have not only served to describe certain incidences or delays, but also are a common denominator for all operations on the stranding site...(Morgunbladid, 13 June 1997).

After seeing the assessment made of the course of actions and the response to it, it was easy to agree with the statements made by the Minister for the Environment. The crisis evolved into a media trap for the authorities where the media attention on the Vikartindur shipwreck only created more tension for the politicians and the general public.

Why did the discussion in the media turn out in this way? The predicament of the on-site management was bound to draw the attention of onlookers and raise questions. But for the most part, the discussions focused on the insufficient dissemination of information by the authorities. Taking the Ministry for the Environment into consideration, which was the center of attention, it is plain to see that they lacked initiative in supplying information to the media. At that time the Ministry did not have a website. It therefore used traditional press releases to formally disseminate information to the media. In 1997 the Ministry submitted just four press releases to the media on the stranding of Vikartindur.

The first was released on April 8, more than a month after the accident. In the press release, an attempt was made to answer the main questions that arose in relation to the pollution caused by the stranding and how the Ministry and its institutions were approaching the matter (Icelandic Ministry for the Environment, 8 April 1997). On May 30 the Ministry for the Environment sent out another press release on the agreement between the Icelandic government and the owners of Vikartindur regarding the execution of the salvaging operation (Icelandic Ministry for the Environment, 30 May 1997).

Finally in August an announcement is given that the Minister for the Environment will visit the site in Hafsfjara in order to examine the remainder of the shipwreck, after which he will have a meeting with, among others, representatives from the local community and a few specialists regarding the clean-up operations and the general state of affairs.

Based on this, one can conclude that few initiatives were taken by the Ministry for the Environment for sharing information with the media. In connection to this, it is of interest to examine the role the media had in building a picture of the situation. As Sundelius (1998) points out, the media invariably becomes a participant in the crisis by influencing and creating the image(s) that the public has of the crisis management. By disseminating information to the public, they decide to a certain extent if the crisis is perceived as well or poorly managed.

In a symbolic way, a Dagbladid reporter had faith in the influence of the media during the crisis. Under the heading “The Sad Tale of Vikartindur” he listed the six main events of the thirty days after the stranding, one of which was an editorial in Dagbladid under the heading “Third World Stranding.” The title certainly gives a good indication of the contents of the editorial; it seriously criticized the whole process and the passivity of the Government. The editorial included statements like, “For days on end nothing is heard of the Govern-

ment” and “No news came from the infamous sleeping EAFI until several days after the accident occurred” (Dagbladid, 11 March 1997).

In an interview in the Morgunbladid on March 7 (two days after the stranding), the Director of the Office of Marine Environmental Protection anticipated that there would be some environmental damage. In his opinion, the worst-case scenario would include regional damage. Thus, very soon in the crisis a responsible public party made a statement to the effect that there was no danger of a large-scale environmental accident, which should have eased the concerns about the stranding.

The way the media presented the comments made by the Minister for the Environment was construed to emphasize the alleged passivity of the Government, and the scarcity of information from the Ministry did not help this. For instance, the Minister for the Environment declared in Morgunbladid that the Government was not going to interfere in the actions of the owners with regard to the clean-up operations, even though they had the legal authority to do so. The title of the article read, “Agreement on doing nothing. Not lacking the legal authority to take over control from the ship owners” (Morgunbladid, 3 April 1997). The article revealed that the Ministry felt that the cleanup of hazardous goods was progressing slowly, but that this was not a reason to interfere in the operations and thus possibly remove the responsibility from the owners with regard to the operations and the cost of the cleanup.

The media was also unfair in portraying the Minister for the Environment and the Ministry, as a whole, as scapegoats for most of what was considered to be wrong in the administration in connection with the Vikartindur stranding. The criticism on not intervening in the clean-up operations was directed towards the Minister for the Environment, even though it would have been in the hands of the Ministry of Justice to intervene based on the law on stranded ships and flotsam. It appears as if both the Minister of Justice and the Minister of Transportation and Communication were forgotten by the media during the course of the crisis. The Ministry for the Environment was criticized for both action and passivity in matters which were not within their scope of responsibility; for example, cleaning up debris and the removal of the shipwreck (which was the municipality’s responsibility). The media often quoted the words of the Minister for the Environment saying that the clean-up process was taking quite a long time and that he was disappointed with how slowly the operation was going.

The Minister for the Environment was abroad on the actual day of the stranding and he was criticized for visiting the site three days later, which was considered late. According to the Minister, he first received news of the stranding from the Director of Administrative Affairs of the Ministry via his cell phone. In their conversation, the Director indicated that the Minister for the Environment and the Ministry itself should probably expect demands for measures concerning the danger of pollution at the site. The Ministry did receive a number of inquiries as to the conditions at the site of the stranding. The Ministry’s staff assessed the situation, and it was necessary for the Minister to visit the site (Bjarnason, e-mail interview 2 May 2002).

It is by no means fair to say that the circumstances at the site were such that the arrival of the Minister for the Environment disturbed the operations. However by showing up at the site, it gave the media a chance to ask him questions and he was only able to answer some of them; thus, walking into a credibility trap. Furthermore, by failing to use this opportunity to explain in detail the division of responsibility among the various ministries, which was vital



at this point, he severely tapped the credibility of his Ministry (State Broadcasting Service and Television, 9 March 1997). In media interviews, the parties within the administration later emphasized this division, although this did not seem to alter the seemingly unanimous standpoint of the media in seeking answers from the Ministry for the Environment. The television interview with the Minister at the site of the stranding was quite likely the reason for this, because he became the symbolic representative of the operations.

In the *Dagbladid* editorial, the following was said about the arrival of the Minister at the stranding site:

The Minister ‘of Pollution’ in Iceland found at last some time on Sunday to make a trip, as a tourist, to the stranding site, jabbering on the matter as if it were more or less irrelevant to him and his office (*Dagbladid*, 11 March 1997).

It is also noteworthy to examine a few of the cases in CRiSMART’s case bank which have taken up the issue of the credibility gap between the media and public on the one hand, and the officials and agencies responsible for crisis response efforts on the other hand. Examples of such pattern are noted in several of CRiSMART’s cases. In the 1981 Hårsfjärden submarine hunt, the main lessons to be learned point to improved media relations. The military was too generous and inconsistent in their information sharing and predicted unrealistically catching a suspected foreign submarine (Bynander, 1998). Another case demonstrating how overconfident statements can cause credibility traps was the 1994 MS Estonia ferry disaster. Statements widely interpreted as prime ministerial commitments in the wake of the crisis to salvage the ferry and recover the dead bodies proved to be difficult to redeem (Stern, 1999). In the Chernobyl crisis “the uncritical acceptance of prognoses and early recommendations, which proved overly optimistic, forced the agency to make a series of rapid retreats and qualifications of their early recommendations to the public causing diminishing public confidence in the domestic radiological protection regime” (*ibid.*).

The Icelandic Ministry for the Environment invariably seemed to be hesitant with the media: Instead of being on the offensive and delivering with confidence information on the situation, the Ministry took a more defensive position. The June 13th report from the Minister for the Environment, three months after the stranding, underlined the Ministry’s hesitance and passivity in defending itself.

The crisis communications during the Vikartindur crisis support Booth’s claims that the public is convinced the Government is dealing ineffectively with the crisis and parties use the situation to exploit other weaknesses in the Government’s handling of more general matters (Booth, 2000). The criticism of the Minister for the Environment and his office after the stranding resulted in the fact that all actions of the Minister and his office were under constant scrutiny both in the Parliament and in the media. Resulting in a “negative attitude that is frequently found in relation to the Minister for the Environment and the office that he holds” (*Dagbladid*, 24 May 1997). Various cases were used to show the incapability of the Minister in resolving problems.

The conclusion of a case study on soil water pollution during the construction of the Halland Ridge tunnel in Sweden revealed that the media held an important role in turning this environmental accident into a major crisis. Further, the media played the largest role in making this accident into something that the entire Swedish nation thought of as a national crisis. The Swedish media was active in disseminating information and the local residents in the crisis area felt that the media was guarding their interests. The municipal authorities took

over the media relations, for the most part, and decided fairly early in the process not to regard the media as an enemy. Rather it seen as the intermediary with the public. As the municipal authorities needed to gain the media's confidence, they provided them with a constant flow of information. This policy included regular press conferences and press releases (Kärde, 1998).

When responding to the measures regarding the stranding of the *Vikartindur*, the crisis managers did not use the media to their advantage. There was no evidence that the Ministry for the Environment tried to develop and nurture relations with the media. Such efforts would have most likely resulted in increased public confidence for the Ministry as well as the institutions within its sphere, and would have perhaps provided them more leeway in managing the crisis without constant criticism of their actions or their supposed lack of action.

#### 5.4 LEARNING

Do the government, the ministries, the institutions, and the public administration units have the capability to learn and use learning to improve their skills? This question provokes those who think the answer cannot be other than affirmative; we cannot maintain a public system by constantly repeating the same mistakes. And does this learning only extend to the individuals who are working within the system, in this case the public servants and the officials? Is it possible to talk about some kind of a systematic learning within social aggregates? March gives an affirmative answer to this question, emphasizing at the same time that learning needs to be mutual between the individual and the organizations (March, 1991). Argyris talks about how organizations learn through individuals acting as agents for them. "The individuals' learning activities, in turn, are facilitated or inhibited by an ecological system of factors that may be called an organizational learning system" (Argyris, 1992). Many scholars are doubtful of the ability of the public sector to learn. As Stern points out systematic efforts to maintain and make organizational experience available to current decision makers are unusual. Organizations forget as well as learn. In the long run, their skills are decided by two factors and which is superior: the learning or the forgetting (Stern, 1997).

Argyris and Schön view the process of learning primarily as a discovery and the correction of mistakes to which the institutions must adapt. Thus, the process is negative feedback of a kind. They describe how it may appear as single or double circulation (single-loop or double-loop learning). Single-loop learning constitutes the ability to correct errors in a work process known in advance. If there is a deviance in the response to a crisis, negative feedback may be extremely prominent and it requires creative solutions, which may be the beginning of the development of new processes. Double-loop learning focuses on how much the working process is reviewed afterwards as a means of improve it. How are we able to learn from a crisis or crises? Such learning is often accomplished with various kinds of interrogations and/or investigations where the purpose is to implement the necessary changes communicated by virtue of experience or knowledge from one crisis to another.

Parties within the Icelandic administration that involved with the *Vikartindur* case would do well to ask, "How were we prepared to handle this situation?" We can call it pre-crisis learning.

As already discussed, the decision makers faced two kinds of problems. On the one hand, they needed to ensure the safety of human lives (and the vessel) and on the other the safety of

the environment. The learning mechanisms already institutionalized within the Icelandic administration were considerably more extensive regarding the safety of seafarers.

Marine accidents have taken the highest toll of human lives in Iceland. The awareness and importance of ensuring the safety of seamen has been strong in Iceland. The overview on the origin and role of institutions and organizations in the introduction of this chapter refers to this powerful learning process.

The initiatives taken by seamen and voluntary organizations have contributed greatly to learning from previous marine accidents. In the wake of the stranding of Vikartindur, there were discussions about the regulations on salvage money. This discussion had arisen earlier when it seemed evident that Icelandic vessels had gone down because of poor decisions where demands on salvage money were impending. As a result of one such incidence, in 1981 the Parliament agreed to commission the Government to examine if there was a need to make changes to the provisions of the Maritime Act on the salvaging of vessels and crews with the objective of preventing captains and ship commanders from declining assistance on the basis of money issues. The revised Maritime Act of 1988 restricted the scope of salvage money. Now it is only possible to claim such money if the vessel was rescued from “imminent danger,” but before the 1988 amendment, the reference point was whether the ship could sail to harbor on its own or not. Despite changes in maritime law, the danger is still present that the impending demand for salvage money will lead to poor decisions and mistakes. When vessels are in imminent danger, mistakes are often made – as was evident from the Vikartindur incident (Thorlaksson, 1997).

As was discussed in the introduction, as recently as 1976 the Icelandic authorities formally included environmental matters on their agenda, and subsequently the Minister of Social Affairs was charged with harmonizing these matters within the Government. Yet Iceland was the only Scandinavian country that had not formally established a Ministry for the Environment by 1980, and several abortive attempts to establish one were made between 1980–1988. In the opinion of the first Minister for the Environment, Julius Solnes, these attempts proved unsuccessful because of the opposition and/or disinterestedness of the ruling party at the time (Solnes, 2001).

As was revealed in the study on the avalanches in the West Fjords, the administrative process was complicated when put to the test (Bernhardsdottir, 2001). Similarly, the legal issues concerning the stranding were so ambiguous that the Ministers of Justice and of the Environment turned to a legal expert (Professor Thorgeir Orlygsson) for clarification on the Government’s rights and obligations for intervention.

Professor Orlygsson pointed out that Act No 42/1926 on strandings and jetsam was over 70 years old and reflected a completely different societal reality and technical circumstances than those of the present (Orlygsson, 1997). This Act does not consider the potential environmental threats in cases of strandings and jetsam. This is a good example of the fact that legislation has not been updated in accordance with the Government’s new priorities and, thus, has become an obstacle in rescue operations. The recent establishment of the Ministry for the Environment, with transferred tasks from six other ministries, did nothing to simplify the already intricate division of responsibility concerning such issues. It is important that the division of responsibility is clear and that the response process is regularly reviewed and coordinated so that it is easily comprehensible when a crisis strikes.

### 5.4.1 *Increased awareness of emergency response*

The stranding of the *Vikartindur* served to kindle the debate in Iceland on pollution and environmental accidents: the greatest risk being the oil tankers sailing to Iceland. Approximately 600,000 tons of oil are transported by sea each year; each shipload amounting to 20–30,000 tons. The tankers sail along the southern coast around the cape of Reykjanes to the Port of Reykjavik. On this route are important spawning grounds and bird nesting sites, as well as recreation areas. The discussion on pollution has mainly been focused on marine pollution. Furthermore, big environmental accidents receive far more attention than slow-occurring contamination over a longer period of time, even if the harm is no less.

In order to meet the need for a more extensive discussion, the Committee for the Prevention and Response on Acute Marine Pollution held a conference in October 1999 solely for the parties involved with such issues. After the conference, there were requests that the project should be extended to cover not only marine pollution but also pollution in general, both at sea and on land. Furthermore, many supported the idea of another conference which would be open to the public as a means of enlightening and kindling the interest of the general public, promoting legislation in this field, disclosing the interests at stake, presenting the measures often taken, and explaining the administration's preparedness for pollution. The Committee complied with this request and held a conference in November 2000 in collaboration with the Ministry for the Environment.

On August 4, 1998, the Minister for the Environment appointed a new and revised Committee for the Prevention and Response on Acute Marine Pollution which included representatives from the Ministry for the Environment, AVRIK, the Icelandic Radiation Protection Institute, the Marine Research Institute, the Environmental and Food Agency, the Icelandic Coast Guard, the Icelandic Institute of Natural History, and the Icelandic Maritime Administration. The responsibility of this Committee is to supervise the following:

- Research the factors lacking in the database compiled by the first Committee.
- Appraise and review programs for the response to environmental accidents.
- Make a risk analysis in the light of the information from the database and other available information.
- Convene when major accidents occur, and at that time the Chairman of the Committee should evaluate the severity of them so that the appropriate Ministries can be informed.
- Review the course of events when operations have been concluded and assess that effectiveness of the measures taken.

The areas of responsibility for the first Committee differed from those of the second. In cases of major accidents, a provision was included to the effect that the first Committee should, “be of guidance in responding as well as **coordinating operations**” While the second committee has the responsibility to “**advise** the Ministry on matters that may arise.” Thus, it was quite clear the second Committee could not assume the responsibility for the authorities, since it was in fact their lawful obligation to respond to the stranding. This illustrates clearly how important appropriate wording is for the correct interpretation of the tasks and the areas of responsibility, especially when appointing government committees.



### *5.4.2 Former experience not put to use*

Several environmental incidents have occurred since the Ministry for the Environment was established. The stranding of the salt cargo ship Eric Boye in 1992 as it approached the harbor in Breiddalsvík could have provided valuable crisis management lessons for dealing with the Vikartindur crisis.

The Icelandic Maritime Administration (IMA) sent at their own risk equipment for pollution prevention to the stranding site in Breiddalsvík with the ICG aircraft. The captain refused to release the vessel and therefore the ICG did not feel it was possibility to intervene in the rescue operations. The ICG did not alter its stance until the representative of the insurance agency arrived at the site and declared the ship a wreck. Although it is possible to maintain that there were not any clear legal provisions to support intervention measures, it is just as clear that the disagreement over the division of responsibility delayed the salvaging operation for several days.

Immediately after the stranding, the IMA Division of Pollution Prevention and the Director of the IMA requested a review of the relevant legislation on environmental accidents and intervention. A committee was appointed with the task of, among other things, deciding whether the sea traffic should be redirected away from the shoreline where there are extensive spawning grounds. Approximately 600,000 tons of oil and oil products are imported to Iceland each year. The main part of this cargo comes from Europe and is transported to the urban area, by the fjord Faxaflói, via important spawning grounds off the southwest coast. In order to redirect such traffic away from this area, Iceland needs the approval of the International Maritime Organization in defining this oceanic area a “precautionary area” or an “area to be avoided.” The Icelandic Coast Guard estimates that this would only minimally change the navigational route of the oil tankers. Unfortunately, the committee did not complete its work due to a number of disagreements.

It is clear that limited access to the area would not have affected Vikartindur, since it was a container vessel and not a tanker. On the other hand, informants from the Environmental and Food Agency were of the opinion that had the captain been informed of the fact that his vessel was drifting without engine power into precautionary waters (as defined by the IMA), he may have reconsidered his course of action more carefully.

The founding of a **Pollution Relief Fund** has long been discussed. A report submitted by the Icelandic Maritime Administration to the Minister for the Environment on March 3, 1994, stressed the importance of making pollution relief funds available for partly covering environmental accidents, including the clean-up measures. In the report, the difficulty in finding the responsible party for the pollution was specifically mentioned. Another point discussed in the report was the delay caused if the institution in question is financially liable in any way, and that this fact needed to be considered because of how extremely important it is to respond quickly to environmental accidents at sea. Furthermore, the report highlighted that disagreements regarding cost and responsibility further delay the necessary clean-up measures or even prevent them (as in the case of the Vikartindur).

Finally, the report emphasized that work needs to be simultaneously done regarding founding the Pollution Relief Fund and legislation on intervention concerning strandings and jetsam. No payments were received for the claims set up by IMA for work done in the aftermath of the Erik Boye stranding. Thus, the voluntary rescue organizations were concerned that they would not be reimbursed and this initially delayed the Vikartindur rescue



operations. The SAR teams had had similar negative experiences. The rescue equipment and the private cars owned by the SAR teams were damaged by sandstorms, the sea and other weather related factors. The SAR teams were not financially prepared to repair the damaged equipment and it was unclear if they would be compensated for the damages. Thus, after the Vikartindur stranding the SAR team members were extremely cautious and waited to assist until the EFAI guaranteed compensation for their work.

### *5.4.3 Learning from the experience of others*

In an interesting article in the Morgunbladid (Eyjolfsson, 16 May 1997) the headmaster of the College of Navigation in Reykjavik draws up a striking comparison between the Vikartindur stranding and the stranding of the oil tanker Amoco Cadiz in France in 1978. Amoco Cadiz drifted at sea for about 6 hours before accepting the assistance of a towboat that was only thirteen nm away. The captain had turned down previous offers for assistance until he got the approval to do so from the shipping company. But it was too late, the ship stranded resulting in the biggest oil spill in European waters. Nearly four hundred km of the Bretagne coastline were covered with heavy fuel oil.

An important learning process immediately was started after the shipwreck. The top priority was to keep oil tankers and all vessels carrying hazardous substances as far as possible from the coastline. Regulations were stipulated on assisting ships in danger. France submitted proposals for new regulations to the IMO, which took effect in January 1979. The Maritime Administration Directors in France are now allowed to give strict orders when a ship has a failure near the coastline and there is a danger of pollution even if the ship is not in territorial waters. In the event that the captain refuses the towboat's assistance, he is given an ultimatum. If necessary, a team may be transported on board the ship via helicopter in order to assess the risk, after which they may intervene in the course of events and override the actions of the captain if they deem it necessary. Coercion may be used and the ship towed in order to prevent it from going down or stranding. The French experience provided valuable lessons about altering navigation routes and authorizing action.

A new French regulation came into effect on March 1, 1997, where the captain of a vessel in imminent danger and the captain of a towboat are required to carry out all measures and orders from the Director of Marine Administrations on the Atlantic, English Channel and North Sea in order to avoid an accident or pollution. Violations against the instructions of the Director are subject to fines (Eyjolfsson, 1997).

There are more lessons to be taken from the French. After the stranding of the Amoco Cadiz, the French Parliament and the French Government established regulations for altered navigation routes and authorization for action. Such directives would have been advantageous if they had been implemented by the Icelandic authorities prior to the Vikartindur incident. Establishing rules similar to the French could perhaps prevent future accidents.

In this respect, it is also of interest to consider the lessons derived from the stranding of the oil tanker Braer off the Shetlands coast in January 1993 (see Booth, 1995). Despite the fact that this stranding resulted in the largest oil spill since the Amoco Cadiz stranding, large-scale pollution and a major environmental crisis were avoided largely due to good luck than careful emergency planning. In a report the International Maritime Organization pointed out that the emergency management systems, the Marine Pollution Control Unit (MPCU),

were effectively and efficiently established. An assessment was not made on how the response units were prepared for large-scale oil pollution

The learning derived from the Braer stranding was that the response should have come earlier. The MPCU admits that often the commanders of ships delay in calling for help. They believe that they are acting in the interest of their superiors and decreasing the cost of assistance, while in fact they are increasing the danger of far more damage. In the meantime, this delays the necessary emergency response. Booth points out that valuable lessons had already been derived from the 1989 Exxon Valdez stranding, but that it was not utilized in responding to the Braer incident.

In the light of the learning gained from the Braer stranding, we question whether the Icelandic authorities could have responded earlier because of the impending danger (that is, the Vikartindur ship drifting in heavy waves without a functioning engine). As described earlier, the Director of the Office of Marine Environmental Protection responded to the Vikartindur incident on the evening of March 5 after hearing of the stranding on the evening news. He then called the ICG to get more information, at which time he was informed that search and rescue operations were ongoing because of a missing person. He therefore decided to wait and see until the next morning. He stated that with the extremely adverse weather conditions and the threat of a stranding in mind, he decided to proceed to the first phase of preparations; i.e., to keep tabs on how things were evolving without initiating any action. The ICG and the EFAI had an agreement concerning the formal exchange of information where the Director of the Office of Marine Environmental Protection was at the top of the list of people who should be informed in the event of an impending pollution accident.

#### *5.4.4 Learning at the Ministry for the Environment*

Even though the Ministry for the Environment learned some valuable lessons, it has been nevertheless important to examine how this crisis specifically concerned the management of the Ministry. Professor Kristinsson pointed out that the strength of a ministry is in part determined by its centrality. The degree of centrality is an indicator of to what extent the different threads of policy making within the sphere of the Ministry are combined in Ministry's top management.

In his research on the budgetary procedure in Iceland, Kristinsson found evidence indicating that the Ministry for the Environment was indeed a very centralized ministry. It is therefore reasonable to assume that the Ministry for the Environment is determinant when it comes to policy formulation in fields pertaining to its sphere of responsibility. In policy formulation it is important to reflect on previous crises in order to make use of them in preventing other such crises in the future. According to Atkinson and Coleman, (1989) the idea of policy network is created in intricate interaction among the politicians, the officials and the interested parties, where one party is actually dominant. The Ministry of Environment's policy network is limited. Thus one might claim that the management of the Ministry should be able to be decisive in the entire policy making without dilatory compromises with a number of parties. In policy making, it is important to adapt to the learning experiences of the past in order to better prepare for the next crisis. As previously mentioned, the newly formed Ministry for the Environment did not have much experience in dealing with crises before the

stranding of Vikartindur. Thus, the Vikartindur case became a precious opportunity for testing the Ministry's structure and gaining experience.

One of the main hindrances to learning in a crisis is when decision makers try to push responsibility for the crisis on others and do not take responsibility themselves. The fact that a serious environmental accident was avoided in the Vikartindur stranding should have provided the management of the Ministry leeway to assess the operations without the participating parties turning defensive. At the same time, a review could have been made on how things would have turned out had the conditions been even more unfavorable (i.e. in the case of an oil tanker, large-scale pollution, etc.).

The Ministry for the Environment was poor in disseminating information to the media, thus adding to the Ministry's predicament. In 1998 the Ministry opened an information web site, increasing and improving its possibility of delivering information quickly and efficiently. When the Boliden dam broke in 1998 in Spain, the local government kept the public and media sufficiently informed by using modern information technology to disseminate relevant information via its home page (Ullberg, 2001).

An important contribution to the learning process of the Ministry was a report submitted by the Director of the Office of Environmental Protection to the Committee for the Prevention and Response on Acute Marine Pollution in October 1997. The experiences and reactions to the accident were assessed, and proposals for improvements were put forth.

#### *5.4.5 New acts and legislations*

A change of policy in the wake of a crisis may indicate that the experience gained from the crisis was assessed in a systematic way, so-called "double-loop" learning. New laws and regulations constitute a clear and definite sign of a policy change.

After the Vikartindur incident, the Act on Hygiene and Pollution Prevention No. 7/1998 was passed. It has presented a general framework for responding to pollution incidents and harmonizing action. It clearly provides the Environmental and Food Agency with the right to intervene to pollution incidents, serious environmental accidents, or other hazards of a similar nature.

The Environmental and Food Agency shall supervise the coordination/harmonization of operations when pollution or serious pollution episodes, food poisoning, or other hazards of a similar nature occur. The Offices of Hygienic and Public Health Control in the local communities shall notify, without delay, the Environmental and Food Agency of such cases and after consultation with the appropriate Hygienic and Public Health Control Committee they shall decide on the necessary measures (The Act on Hygiene and Pollution Prevention, No. 7/1998: Article 29, Paragraph 2 "The Vikartindur provision").

Regulation No. 465/1998 on the response to a pollution episode is based on the Act No. 32/1986 on the Prevention of Marine Pollution and the Act No. 7/1998 on Hygiene and Public Health Control. In essence, the regulation further stipulates the proposals made by the so-called first "Committee for the Prevention and Response on Acute Marine Pollution," which compiled a database on the preparedness for acute pollution episodes at sea and was published in 1997 by the Ministry for the Environment. The main goal in the passage of this regulation is twofold:

- Explain the involvement and division of responsibility of the relevant parties, and
- Promote coordinated action.

Hence, the provisions of this regulation strive to coordinate the actions to be taken in the case of sudden pollution of the sea, the coastline or the harbor due to an oil spill or a comparable accident in order to reduce or prevent damages at all costs. The regulation further stipulates the responsibility and sphere of operation for those responding to a pollution incident at sea, and the drafting and design of response programs to be used within and outside harbor areas in accordance with Articles 17 and 18 in Law No. 32/1986. The main goal is to clarify involvement, division of tasks, response, and the division of responsibility of the agencies that have the lawful obligation to work in a joint effort when a pollution incident occurs by writing an agreement in order to enhance coordinated and more efficient action.

On December 18, 1998, the Minister for the Environment, Gudmundur Bjarnason, appointed a committee whose task was to review Act No 32/1986 on the Prevention of Marine Pollution in light of past experiences and the international agreements on sea pollution. In September 2001, the committee presented a draft to the Minister for the Environment, who subsequently on February 14, 2002, submitted it to the Icelandic Parliament for an initial discussion of a new parliamentary bill on the protection of the marine and coastal environment.

The primary aim of this bill was to cover the issues regarding a pollution incident at sea, including how to execute preventive and response measures. Furthermore, the provisions of the bill were aimed at stating more clearly and more accurately the responsibility, the sphere of operations and the division of tasks among those who have certain obligations to fulfill in executing the law. It is also assumed that the polluter will take greater responsibility when damages are caused by pollution. The bill is divided into two main sections: the protection of the sea and the coastlines, and specific provisions on the protection and response to pollution. It is to replace Act No. 32/1986 on the Prevention of Marine Pollution.

It is proposed that government bodies be charged with the implementation of the law with the Environmental and Food Agency under the supreme command of the Ministry for the Environment. The monitoring shall be in the hands of the Environmental and Food Agency, except for the territorial waters around Iceland which the Icelandic Coast Guard will monitor. The Icelandic Coast Guard is charged with the obligation of notifying the Environmental and Food Agency when they suspect or become aware of pollution at sea or on the coastline. According to the law, however, it is the Environmental and Food Agency that is responsible for taking the appropriate coercive action. The Icelandic Maritime Administration is in charge of continuously controlling the pollution prevention equipment on ships.

The main innovations in this bill regard the so-called pollution episodes, which designate sudden pollution of the sea and/or the coast and which require immediate recovery and clean-up measures. Provisions on pollution episodes are present in the current law, although when it comes to the execution of the law, the provisions of Directive No. 465/1998 on pollution episodes have been the primary source of reference, and substantially it is proposed that the main provisions of this directive be included in the new bill.

The proposal states that the Icelandic Coast Guard is clearly and without a doubt authorized to intervene and is able to take the necessary measures in Icelandic oceanic waters in order to prevent, reduce or preclude a pollution episode in the event of an accident at sea, in consultation with the Environmental and Food Agency and, if appropriate, the Port Author-



ity. It is of vital importance to include a provision for intervention in the law, since there is no such provision in the present legislation. Therefore the authorities are not able to take the necessary steps, even in the face of an impending pollution episode.

Innovative proposals on navigational routes and stranded ships are also included. The Minister of Transportation and Communication in consultation with the Minister for the Environment, the Minister of Justice and the Minister of the Fisheries have suggested legally passing a regulation on vessels carrying oil or dangerous goods in Icelandic waters. This would help eliminate exposing environmentally sensitive areas to the pollution risks.

The bill was not discussed by the Icelandic Parliament in 2002 or by its environmental committee, but was sent out for feedback and comments. Subsequently, the bill was again submitted to the Icelandic Parliament in December 2002 taking into account the comments previously received. Finally the revised bill was submitted for the third time in October 2003 and awaits approval.

#### *5.4.6 Lessons put "on ice"*

As described earlier the Icelandic Coast Guard was of the opinion that the stranding of the *Vikartindur* illustrated the necessity to increase the power of the institution and the other authorities for decision making when ships are in danger at sea within the twelve mile limit of territorial waters. The *Vikartindur* stranding also demonstrated beyond a doubt that measures for preventing and responding to pollution episodes were lacking. In addition, it clearly showed that a review of the appropriate legislation was necessary and that laws and regulations needed to be clear cut and decisive, that certain authorities were charged with the obligation to instigate a response operation, that defined communication channels were needed between parties involved and that it was necessary to get liability from the insurance against possible damage. As mentioned earlier the IMA Office of Marine Pollution Prevention and the Director of Shipping had requested such a review in the light of the *Erik Boye* stranding on the east coast of Iceland in 1992.

On April 23, 1997 the Minister of Justice appointed a committee that was to revise the Act on Strandings and Jetsam: No. 42/1926. The committee's suggestion for charging the so-called "Coastal Committee" with the supreme command of coastal affairs was criticized. The Minister of Justice was supposed to appoint this committee for a term four parliament members and it was assumed that such an arrangement would not be beneficial in the event of a stranding. On the contrary, it would only be an addition to the existing system and it would very likely serve to increase the legal uncertainty and not reduce it. It was instead suggested that the institutions responsible for handling such issues be required to make a joint agreement on an appropriate procedure. Furthermore, it was pointed out that some of the provisions already existed in the current law (see Article 17: The Act on Nature Conservation) and that in some cases the provisions even contradicted the existing laws; the rights of the Coastal Committee for intervention is in conflict with the provisions of the Maritime Act and agreements that have legal validity (see Act No.14/1979).

After receiving this criticism in the Parliament, the bill was "put on ice" using the words of the Permanent Secretary of the Ministry of Justice; meaning, it is preserved but not forgotten and will probably be reviewed in the near future. This is an example of a lesson that was indeed not learned from the *Vikartindur* stranding. Regrettably, if the situation should arise



today for the administration to respond to a similar stranding, it would have to be assumed that legal uncertainty would again hinder the administration's response.

## *6 Summation and Conclusions*

Extensive pollution was avoided when Icelanders, with the assistance of foreign parties, managed to salvage most of the oil from Vikartindur that ran aground on March 5, 1997. The tasks that the response bodies needed to tackle in the wake of the stranding also involved salvaging other cargo and cleaning up the beach. Towards the end of the summer in 1997, most of the Vikartindur wreck had been removed at the expense of its owners. The crisis had a much happier ending than was expected right after the stranding took place. In light of this, it is of great interest to consider the critical public discussions towards the response during the spring and summer in 1997. This criticism was specifically analyzed in this study, and an assessment was made of the preparedness and response. A short summary of the critical aspects of the process, the lessons for learning and the proposals for improvement are provided below.

The Vikartindur stranding constituted a twofold problem for the Icelandic administration. Firstly there was the rescue of the vessel and its crewmembers, and secondly the protection of the environment. Due to the extremely difficult weather conditions, the Icelandic Coast Guard failed to connect a towline to the Vikartindur, and in the process of trying to do so a coast guard crewmember was washed overboard. The main strength in the rescue operation was the interaction that was triggered between the parties involved: the Icelandic Coast Guard, the Ships Reporting Duty and the ICE-SAR. They were able to utilize a well-established information process, of which they had good knowledge and the pursuit of which they were very well trained in. In addition, the extensive experience and training of the ICG helicopter team proved to be invaluable in rescuing the Vikartindur crew.

An entirely different matter was at hand concerning the protection of the environment. With respect to this matter, the Icelandic administration proved to be poorly prepared in tackling a crisis situation of this magnitude. The Icelandic legislation was inadequate and the division of work was both complicated and ambiguous. When looking for an explanation to clarify why the preparations were insufficient, it must be kept in mind that the public only fairly recently had become aware of the importance of environmental protection in Iceland. It was just in the late seventies that the authorities put this issue on the agenda. In 1986 the first piece of comprehensive legislation was adopted on the prevention of marine pollution. Yet, it became apparent in the response to the Vikartindur stranding that, in effect, this law did not provide sufficient legal support (i.e. there was no provision about which party should have supreme on-site command of measures pertaining to a pollution incident).

The Ministry for the Environment was established in 1990 and the sets of issues with which it was charged had been transferred from six other ministries, a measure which clearly required a revision of the coordination between those who were involved with such issues. The stranding of the Vikartindur revealed that this coordination did not enable the relevant parties to handle such crises properly. At the time of the Vikartindur stranding, this recently established Ministry did not have much experience, and this crisis marked the first occasion on which its staff needed to respond to an incident.

The fact that the shipping company that owned *Vikartindur* was a foreign one meant that communications and negotiations were more complex than if it had been Icelandic owned. The insurance company and later on a foreign salvage party arrived on the scene on behalf of the shipping company, and imported equipment was used in the salvage operations. Such circumstances can easily create conflict between the domestic and foreign parties. The cooperation during the salvage operations turned out to be successful, and the fact that the Icelandic experts never doubted the need for outside assistance was certainly significant.

The conflict around the foreign command of the salvage operations was apparent by the reaction of the public and the media. It was insinuated that foreign interests came before Icelandic, resulting in delays, and the public demanded that the Icelandic authorities intervene. The conflict also appeared in various other forms and in the aftermath different interests crystallized. The carriers (the owners of *Vikartindur*'s cargo) certainly had much at stake, and the local communities and the local authorities misunderstood who could claim the drifted goods. The Parliament criticized the supposed lack of action in response to the stranding, with the opposition becoming more and more vocal in its criticism as time went on.

Last but not least, there were important repercussions resulting from the so-called war of the flag of convenience, which involved among other things a fight against foreign crews being used on scheduled sailings by Icelandic shipping companies. In the harsh criticism of shipping companies using flags of convenience, it was maintained that both human lives and the environment were being put at risk when foreign crews lacking proper qualifications were allowed to sail in the difficult waters around Iceland. Despite the conflicts and the environmental accident, no interest groups voiced their concern for the protection of the environment or the natural habitat. Such groups might have focused on protecting wild bird life and/or the spawning grounds. The absence of interest groups is perhaps the best illustration of the extent the public in Iceland exercises its power in protecting the environment. Quite recently, groups have been formed with the aim of fighting heavy industry and power plant operations. The criticism directed to the Government in the aftermath of the stranding has stretched to include the Government's measures on environmental issues. The opportunity was seized by the opposition in parliament to draw a parallel between their response to these issues and their initial response to the environmental accident that occurred after the stranding of *Vikartindur*.

Immediately in the days following the stranding, Icelandic pollution prevention experts were able to declare that even if everything turned to the worst in the oil recovery operation, there would still only be local damage. One month after the stranding, most of the oil pollution had been dealt with and eventually over ninety-five percent of the oil had been recovered. Six days after the stranding, the owners of the *Vikartindur* submitted a declaration of intent to the Ministry for the Environment regarding their liability in the operations. On April 2, all parties concerned submitted a declaration in which they guaranteed, in accordance with Icelandic law, the reimbursement of costs arising from the cleanup up to ISK 50 million. On May 30 an agreement was signed on the salvaging operation, which included provisions on payments of all costs related to the rescuing of the ship, handling of cargo, and police expenses: up to 30 million ISK.

Cooperation between the Icelandic and foreign experts was successful despite various setbacks: poor weather conditions, the delay in getting the necessary salvage equipment, and the constant criticism regarding the salvaging operations. With the above in mind, it is understandable the attitude of the Director of the Office of Pollution Prevention had in the asking

following question regarding all of the criticism, “What crime has been made?” (see Egilsson, 7 March 1998).

The next topic of discussion is the part the media played in the Vikartindur crisis; a role that was substantial considering the public actually perceived the crisis to be very serious because of the media coverage. The media kindled the skepticism of the public regarding the administration’s ability to handle the problem. The predicament and troubles in the initial stages of the operations, the delays in the cleanup, and the conflict of interests were all bound to attract the attention of the media. However, being in the spotlight augmented the problems for the administration, and as a result the struggle with the technical aspects of solving the problem became far less important than the great “media crisis” which in fact became the actual crisis. This spotlight was not always used with fairness or a full understanding of the situation, yet the fact that the media relations developed in this way must be mainly accredited to the administration itself.

The Ministry of the Environment’s information management turned out to be the weakest link in the crisis management of the Vikartindur stranding. The Ministry lacked the initiative to form a working relation with the media and provide them with an active dissemination of information on how the salvage operations were going. It was a severe setback for the recently established Ministry, which at the point was not equipped with modern information technology. The key lesson that the Ministry for the Environment can derive from this crisis, and the administration as a whole, is that media relations are an integral part of crisis management. Thus, the administration must always be prepared to tackle such issues when a crisis hits.

Crisis management not only concerns responding to crisis situations, it also involves preparing to handle such incidents. This includes using the lessons gained from one crisis in order to better prepare for the next one. The key issues to examine in the Vikartindur stranding were the level of preparedness for such a crisis and who had the responsibility to deal with it. Had rules on navigation routes been present and had the antiquated Act on Strandings and Jetsam been updated, the stranding might very well have been prevented, or, to say the least, the first response might have been more efficient. The Ministry for the Environment is only authorized to act when pollution has actually occurred. At this point in time, work was being done in the Ministry on a provision on the establishment of a pollution relief fund that would prevent disputes on costs and liability regarding clean-up operations: a provision that would have been extremely useful in responding to the Vikartindur stranding. In the case of big oil tanker strandings, it is highly unlikely that the Icelandic authorities have sufficient financial means to carry the cost of the necessary measures and, therefore, they would need to seek foreign assistance. Preventive action is essential, but as illustrated before the responsibility for this lies within three ministries.

It was clear from the beginning that the legal framework needed to be improved in order to ameliorate the competence of the administration. Some of the learning derived from the Vikartindur incident has been used to create new laws and regulations. For example, “The Vikartindur Provision” of the Act on Hygiene and Pollution Control provides for the unambiguous right of intervention by the Environmental and Food Agency in the coordination of operations following a pollution accident. A new regulation on the response to a pollution episode aims at coordinating operations following oil pollution of the sea and the shores. Finally, a new bill on the protection of Icelandic waters and shores has been submitted to the

Icelandic Parliament for approval. In particular, this bill is aimed at covering pollution episodes at sea, including preventive measures and response.

Important changes still remain to be made in terms of the legal framework. For example the Act of 1926 on strandings and jetsam is still in force. This law is completely outside the realm of today's reality, creating legal uncertainty for those who are involved with these issues. It is also clear, that before the Vikartindur stranding occurred, former experience gained from pollution accidents was not used to increase preparedness. In the wake of such accidents, it had been pointed out that there was a need to revise the legislation on pollution episodes and intervention. Similarly, the necessity of establishing a pollution relief fund had also been previously mentioned, so that disputes regarding operation costs and liability would not interfere with the clean-up measures. If real learning had brought about such changes, the initial response to the Vikartindur stranding would have most likely been more efficient.

The lack of follow-up with regard to bringing about changes is apparent in various other aspects of the learning process. An informal project team had worked on proposals about re-directing sea traffic away from the spawning grounds, but never completed their work due to internal disagreement, which finally resulted in the group's dissolution. A committee appointed by the Minister of Justice was charged with revising the previously mentioned Act on Strandings and Jetsam. The committee's suggestions were criticized and further work on the act was put on hold. A study on the preparation and response of the administration after the snow avalanches in the West Fjords in 1995 revealed a similar pattern. Before the avalanches in Sudavik, there were several examples of committees that had either been dissolved or were unable to implement their contribution in the field of prevention of snow avalanches and mud avalanches. The administration needs to a greater extent to make such work more efficient: in terms of the finance input and the groups' output.

The Icelandic government decided not to intervene in the salvage and clean-up operations after the Vikartindur stranding despite strong media and public pressure. The Government adamantly trusted the words of the Vikartindur owners and did not want to strip them of the responsibility by intervening. This decision turned out to be a wise one because the owners fully abided to their liability and carried all the costs for which they were responsible.

It was extremely fortunate for the Icelanders that the Vikartindur stranding was not the serious environmental accident everyone feared in the beginning. It is worth noting, that most of the people who were interviewed for this study pointed out that it would be unwise to expect the same happy ending for the next stranding. A little over six years has passed since the accident, and unfortunately part of the momentum for reforms and reflection have tapered off. The promise for essential improvements has yet to be carried out. If the administration now falls asleep while guarding these issues related to sea accidents and strandings, there looms the danger that it will only wake up when the next ship runs aground. The next stranding might easily have much graver consequences than that of the Vikartindur.

## 7 References

- Althydubladid* – newspaper. 12 March 1997a. “Fulltrúi ITF beinir spurningum til Eimskipa og Flugleida. Saknað við sjóprófin” [Representative of ITF Questions Eimskip and Icelandair. Missed at the Maritime Inquiries Investigation].
- Althydubladid* – newspaper. 12 March 1997b. “Rangt hjá ráðherra” [Minister Got it Wrong].



- Argyris, Chris (1999) *On Organizational Learning*. Oxford UK: Blackwell Publishers Ltd.
- Arnalds, Einar S. (2000) *Mannslíf í hufi – Saga Slysavarnafélags Íslands*. [The History of the National Life Saving Association]. Reykjavík: Mál og mynd.
- Bernhardsdóttir, Asthildur E. (2001) *Learning from Past Experiences – The 1995 Avalanches in Iceland*. Stockholm: The Swedish National Defence College.
- Bjarnason, Gudmundur. Icelandic Minister for the Environment. E-mail interview, 3 May 2002.
- Booth, S. (1995) “The Braer Disaster: A Virtuous Crisis? – International Responsibility and Prevention of Incidents at Sea.” *Journal of Contingencies and Crisis Management*. 3:1, pp 38–42. Cambridge, US: Blackwell Publishers Ltd.
- Booth, S. (2000) “How Can Organisations Prepare for Reputational Crisis?” *Journal of Contingencies and Crisis Management*. Oxford: Blackwell Publishers Ltd.
- Bragason, Gudjon (1999) *The Case of Vikartindur*. Unpublished report by the Magistrate of Rangarvalla County.
- Bragason, Gudjon. Representative of the Magistrate of Rangarvalla County. E-mail interview, 10 May 2002.
- Bynander, Fredrik (1998) “A Decision Making Analysis of the 1982 Hårsfjärden Submarine Incident.” In *Crisis and Internationalization: Eight Crises Studied from a Cognitive Institutional Perspective*, edited by E. Stern and F. Bynander, pp. 52–90. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Dagbladið* – newspaper. 7 March 1997a. ”Björgunarlaunin geta verið há fyrir að bjarga skipi ur sjávarhásku: Skipstjórar hafa fengið bágt fyrir að kalla eftir aðstoð” [The Amount of Salvage Money for Rescuing a Ship Could Get High].
- Dagbladið* – newspaper. 7 March 1997b. ”Búumst við staðbundnum skaða í versta falli” [Worst-case Scenario Includes Regional Damage].
- Dagbladið* – newspaper. 10 March 1997. ”Björgunarlaun vegna Vikartinds hefðu vart orðið undir 5% af verðmættum. Hagsmunir utgerðar réðu trulega mestu. [Salvage Money for Vikartindur Would Not Have Probably Been Less Than 5% of Its Value].
- Dagbladið* – newspaper. 11 March 1997. ”Þriðja heims strand” [Third-World Stranding].
- Dagbladið* – newspaper. 12 March 1997. “Ekki ástæða til fundar „viðbragðsnefndar“” [No Need for the ‘Response Committee’ to Meet].
- Dagbladið* – newspaper. 24 March 1997. ”Liggur undir á mæli” [Lies Reprimanded].
- Egilson, David (1997) *The Stranding of Vikartindur*. Unpublished report to the Committee for the Prevention and Response on Acute Marine Pollution. Reykjavík: The Environmental and Food Agency of Iceland.
- Egilsson, David (7 March 1998) “Að loknu Vikartinds(f)ári” [The Vikartindur Crisis in Retrospect]. *Dagbladið* – a daily newspaper.
- Egilsson, David. Director of the Office of Marine Pollution Prevention. Personal interview, 20 December 2001. E-mail interview, 29 January 2002.
- Eimskip Holding – Iceland Steamship Company Ltd. 2002. “About Eimskip.” Available at: <http://www.eimskip.com> (20 February 2002).
- Eyjolfsson, Gudjon. (7 March 1997). “Kunnugir hefðu kallað á hjálp” [Anyone Familiar with the Surroundings Would Have Called for Help]. *Althýdubladid* – daily newspaper.
- Eyjolfsson, Gudjon (16 May 1997) “Strand Amoco Cadiz og Vikartindur” [The Stranding of Amoco Cadiz and Vikartindur]. *Morgunbladid* – a daily morning newspaper.



- Fridfinnsson, Bjorn. Current Permanent Secretary of the Ministry of Justice. E-mail interview, 14 March 2002 and 3 April 2002.
- Gudrodarson, Fridjon. Magistrate of Rangarvalla County. E-mail interview, 10 May 2002.
- Hafsteinsson, Heimir. Chairman of the District Council of Djupar. E-mail interview, 3 February 2002.
- 't Hart, Paul; Uriel Rosenthal and Alexander Kouzmin (1993) "Crisis Decision-Making: The Centralization Thesis Revisited." *Administration and Society*, 25:1 (May), pp. 12–45.
- Haspers, Anneli (1998) "MV Estonia Catastrophe." In *Crisis and Internationalization- Eight Crises studied from a Cognitive-Institutional Perspective*, edited by E. Stern and F. Bynander, pp 286–316. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Heidenheimer, Arnold J.; Hugh Hecló and Carolyn T. Adams (1990) *Comparative Public Policy – The Politics of Social Choice in America, Europe, and Japan*. London: Maxmillan Press Ltd.
- Hood, Christopher (1998) *The Art of the State – Culture, Rhetoric and Public Management*. Oxford: Clarendon Press.
- Icelandic Coast Guard. "Sagan." Available at: <http://www.lhg.is/lhg.nsf/pages/sagan.html> (20 February 2002).
- Icelandic Marine Accident Investigation Board. 20 February 1997. "Lög um rannsókn sjólysa." [Law on Maritime Investigation]. Available at: <http://www.rns.is> (Accessed in 2002).
- Icelandic Maritime Administration. 4 March 1997. "Utgáfa." [Publications]. Available at: <http://www.sigling.is> (Accessed in 2002).
- Icelandic Ministry for the Environment. 8 April 1997. News release.
- Icelandic Ministry for the Environment. 30 May 1997. News release.
- Icelandic Ministry for the Environment. 6 August 1997. News release.
- Icelandic Ministry of Justice. 23 April 1997. News release.
- Icelandic Parliament (11 March 1997) Discussions.
- Icelandic Parliament. 1998. Parliamentary bill regarding the amendment of Law 34/1985. (Parliament 122/1997–1998).
- Icelandic Parliament. 2000. Parliamentary bill "Strandings and Jetsam" (Parliament 125/1999–2000).
- Icelandic Parliament. 2002. Parliamentary bill "Prevention of Marine Pollution" (Parliament 127/2001–2002).
- ICE-SAR. "A tale of achievement, Rescue on sea and land, Icelandic ships reporting duty." Available at: <http://www.landsbjorg.is> (22 February 2002)
- International Shipping Federation. "About ISF." Available at: <http://www.marisec.org/isf/index.htm> (22 February 2002).
- International Transport Workers' Federation. "About ITF." Available at: <http://www.itf.org.uk/online/english/210302.htm> (23 February 2002).
- Jensson, Helgi. Present Director of the Office of Marine Pollution Prevention. E-mail interview, 7 May 2002.
- Kärde, Thérèse (1999) *The Halland Tunnel Crisis, 1997*. Unpublished report. Stockholm: CRISMART.
- Ketilsson, Sigurdur Steinar. Director of the Guard for the Icelandic Coast Guard. E-mail interview, 7 May 2002.

- Kingdon, John W. (1995) *Agendas, Alternatives, and Public Policies*. USA: Addison-Wesley Educational Publishers Inc.
- Kjaernsted, Borgthor. Inspector of the International Transport Federation in Iceland. E-mail interview, 26 April 2002.
- Kristinsson, Gunnar H. (1999) *Ur digrum sjóði – Fjárlagagerð á Íslandi*. [Out of Big Pockets. Budget Planning in Iceland]. Reykjavík: Félagsvísindastofnun Háskóla Íslands, Háskólautgáfan,
- Lauristin, Marju (1996) *Proceedings from the International Conference on Crisis Management at the National Level (Stockholm, March 20–26)*, edited by I. Johansson and P. Skoglund, pp 85–95. Stockholm: The Swedish Agency for Civil Emergency Planning.
- March, J.G. (1991) “Exploration and Exploitation in Organizational Learning.” *Organization Science*. 2:1, pp. 71–87.
- Marine Accidents Investigation Committee. October 1998. Report No. 18/1997. Reykjavik: Marine Accidents Investigation Committee.
- Morgunbladid* – newspaper. 7 March 1997a. “Reynt að tæma skipið” [Attempts Made to Empty the Ship].
- Morgunbladid* – newspaper. 7 March 1997b. “345 tonn af svartolíu og nokkur tonn af víttissóða” [345 Tons of Heavy Fuel Oil and Chemicals].
- Morgunbladid* – newspaper. 8 March 1997a. “Reyndu að prutta við Landhelgisgæsluna” [Tried to Bargain with the Coast Guard].
- Morgunbladid* – newspaper. 8 March 1997b. “Skældir og snunir eftir smástund í brimrótinu” [Containers Bent Just After Few Minutes in the High Waters].
- Morgunbladid* – newspaper. 11 March 1997. Maritime Inquiry.
- Morgunbladid* – newspaper. 26 March 1997. “Ráðherra segir þolinmæðina vera að bresta” [Minister Says He Is Running Out of Patience].
- Morgunbladid* – newspaper. 3 April 1997. “Krafist verður tímasettrar áætlunar um lok hreinsunar” [A Deadline for the End of the Clean-up Operation Will Be Demanded].
- Morgunbladid* – newspaper. 9 April 1997. “Kæra til sýslumanns vegna efnis bréfs lögmans til sýslumanns. Verktaki á Hellu telur sig þjófkenndan” [Lawyer’s Letter to the Magistrate Triggers a Complaint].
- Morgunbladid* – newspaper. 10 April 1997. “Vilja opinbera rannsókn á björgun farmsins” [Official Investigation of the Cargo Salvage Is Requested].
- Morgunbladid* – newspaper. 13 June 1997. Vikartindur – mengunarslysi forðað. [Vikartindur – A Pollution Accident Avoided].
- National Life-Saving Association (2003) <http://www.landsbjorg.is>
- Newlove, Lindy; Eric Stern; and Lina Svedin (2000) *Auckland Unplugged*. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Nowak, Kjell (1996) *Proceedings from the International Conference on Crisis Management at the National Level (Stockholm, March 20–26)*, edited by I. Johansson and P. Skoglund, pp 95–103. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Orlygsson, Thorgeir (1997) *Greinargerð til dómsmála- og umhverfissráðuneyta vegna strands Vikartinds* [Letter to the Ministries of Justice and the Environment].
- Sigurdsson, Ingimar. Deputy Secretary General /Director for the Office of Nature Conservation and Quality of Life. E-mail interview.
- Solnes, Julius (2001) “Umhverfismál – Saga og þroun” [Environmental Affairs. History and Development (Draft)]. Available at: <http://verk.hi.is/solnes/-1149/saga.pdf>

- State Broadcasting Service and Television [Ríkisutvarpid Sjonvarp] (9 March 1997) The Evening News.
- Stefansson, Haukur M. Manager of the Ship and Container Department. E-mail interviews, 2 May 2002 and 20 May 2002.
- Stern Eric K. (1997) "Crisis and Learning: A Conceptual Balance Sheet." *Journal of Contingencies and Crisis Management*, 5:2, Cambridge, USA: Blackwell Publishers Ltd.
- Stern, Eric K. (1999) *Crisis Decisionmaking: A Cognitive Institutional Approach*. PhD diss., Department of Political Science: University of Stockholm.
- Sundelius, Bengt and Eric Stern with Fredrik Bynander (1997) *Krishantering på svenska – teori och praktik [Crisis Management the Swedish Way: Theory and Practice]*. Stockholm: Nerenius & Santerus förlag.
- Sunnlenska* – newspaper (9 April 1997) *Lögfræðingur Háfsbænda sendir bréf til sýslumanns Rangárvallasýslu*. [A letter written by the attorney for the Hafur farmers to the District Magistrate of Rangarvalla County].
- Supreme Court of Iceland. 1999. Ruling No. 290/1999.
- Supreme Court of Iceland. 2002. Ruling No. 32/2002.
- Thordarson, Birgir. Representative of the Public Health Authority in Sudurland. E-mail interviews, 29 January 2002 and 2 May 2002.
- Thorlaksson, Jon E. (30 April 1997) "Critical Rules for Salvage Money" *Viðskiptablaðið* – daily newspaper.
- Ullberg, Susann (2001) *Environmental Crisis in Spain: The Boliden Dam Rupture*. Stockholm: The Swedish Agency for Civil Emergency Planning.
- Vertzberger, Yaacov U.I. (1990) *The World in Their Minds – Information Processing, Cognition, and Perception in Foreign Policy Decisionmaking*. Stanford: Stanford University Press.
- Vinnan – magazine. 1998. "Lögbann á aðgerðir gegn hentifánaskip" [Prohibition on Measures Against Ships Flying Flags of Convenience]. Volume 9. Available at: <http://www.asi.is/vinnan/1998/vinnan9/hanseduo.htm> (5 March 2002).

## *Appendix 1 – Chronology*

### **March 5**

07:13 A warning signal went off in the engine control room (ECR) indicating a low surface in the low temperature expansion tank. The ship was then approximately 100 nm away from its destination in the Reykjavik harbor. According to a certificate from the Meteorological Office of Iceland, at 06.00 in Storrhöfði the wind force was 7 (14–16 m/sek) from the SW with strong waves. In this area, approximately 11 nm south of the estuaries of Thjorsa, the depth of the sea is around 80 m during the average flood stream and the seabed is fairly soft. The area is quite open to the south and southwesterly waves can be stronger closer to the shelf.

07:45 The main engine speed was reduced in order to make a minor repair; the chief engineer announced to the skipper that it would only take 10–5 minutes to repair a leaking pipe.

08:54 The electricity went off causing a blackout on the ship. A short while later the ship's main engine shut down. An auxiliary electricity generator automatically started so the electricity was quickly restored. The skipper calculated that the ship was 12 nm away from shore (10,5 nm from the site where the ship finally ran aground), with a drifting speed of approximately 2,5 knots and that it would take the ship around 4 hours to drift to shore if neither the anchor nor the engine were used to stop the drift. The chief engineer thought that the electricity failure was caused by insufficient pressure in the cooling system due to a lack of water in the system. The expansion tank for the cooling water was practically empty. In order to mend this, a pump used for filling up the expansion tank was started by connecting it to a fuse board in the steering engine. It was not properly connected to the auxiliary electricity generator so even though the pump and pressure was restored in the pipe, the tank did not fill up.

A closer inspection of the cooling system by the chief engineer and the other crewmembers in the ECR revealed that the valves of the expansion tank were not letting any water pass through. The valves were dismantled, checked and then reconnected to the piping. The water was released, the tank filled up, and the chief engineer reckoned that there was sufficient water in the cooling system. He informed the skipper that the repair was completed.

11:30 The main engine was started up again. Soon after, a message came from the ECR stating that the main engine needed to be stopped again. A closer inspection revealed another leak in the scavenging air cooler of the low temperature system. The unprofessional reparation of the water leak in the low temperature scavenging air cooler caused a water leak. The joints on the inner side of a drainpipe had inadvertently been unscrewed when the first leak was repaired, causing the engine to fill up with water; a supercharger was flooded and the main engine sounded abnormal when it was started. It was stopped at 11:33. The leak in the scavenger air cooler was repaired, the lid put on, and the expansion tank refilled. The scavenging air pipe valves were opened in order to check whether there was water inside the scavenging air pipes. This repair took approximately 2.5 hours.

12:00 The weather conditions remained the same and the ship was slowly plunging, because it lay perpendicular to the wind and the sea. The skipper calculated that the ship was approx-

imately 5 nm from shore, because the main engine was down. The total drift of the vessel for the last two hours had been 5.0 nm shoreward.

12:16 On the initiative of the staff of the Eimskipafelag Islands hf. (Eimskip), contact is made with the Icelandic Coast Guard and they are informed of the situation. Karl Gudmundsson, the stevedore supervisor, had already in the morning expressed his concern over the situation both to them and to the skipper. In turn, they had informed Peter Döhle (GmbH & Co) in Hamburg, who was the agent and operating party of Vikartindur on behalf of the ship's owner, the Atlanta Schiffartgesellschaft mbH & Co. The decision was made to call in the coast guard vessel, Aegir, since it was at the time just west of the Westman Islands.

12:28 The Icelandic Coast Guard proposed that the vessel drop its anchor and release as much chain as possible.

12:35 The starboard anchor and three shackles of the anchor chain were dropped in order to reduce the drifting. The depth was approximately 60 m. The winds in Eyrarbakki were SW with a wind force of 7 and in Storhöfði WSW with a wind force of 8.

12:41 A warning was sent out (a "security call") on the VHF channel 16. The radio station on the Westman Islands received this call and asked whether they needed assistance. The Vikartindur crew turned down the offer and said that they had dropped the anchors and hoped that they would hold.

12:51 The GPS equipment in the bridge of Vikartindur indicated that the drift of the ship had not stopped when the anchors were dropped. Another shackle of the anchor chain was dropped and yet another at 13:02.

12:58 The radio station on the Westman Islands called the ship and asked how far it was from the shore. Vikartindur crew informed them that the drift speed of the ship was 2.5 nm and they were making efforts to stop the drift of the ship. Assistance from the ferry Herjolfur was turned down.

13:11 The Icelandic Coast Guard called out the land based ICE-SAR teams.

13:12 The Icelandic Coast Guard asked the Westman Islands radio station to call the Vikartindur crew to find out how many crew members were aboard and to tell them to use all of the anchor chain.

13:16 The port anchor and three shackles were dropped.

13:22 The ferry Herjolfur arrived offering their assistance, which was turned down. The ship was 2.5 nm from shore.

13:27 Two more shackles were dropped from the port anchor chain and one of the starboard anchor chain. The distance to shore was now 2.1 nm and the vessel was still drifting. The weather conditions were turning adverse with a wind force of 8–9 and a storm was forecasted later in the day.

13:37 Six shackles had been dropped of the starboard anchor chain and five of the port anchor chain. The ship was then approximately two nm away from shore and the wind force had increased from the southwest, with gusts reaching 11. According the GPS equipment aboard, the ship had stopped drifting at that time.



At approximately 14:00 the coast guard crew on Aegir arrived and the ferry Herjolfur sailed away.

14:02 The repair of the main engine was completed and the ship was started.

14:03 The Meteorological Institute of Iceland predicted a storm.

14:08 The coast guard contacted the Vikartindur captain and offered their assistance, which the skipper turned down, since the main engine was running again and the anchors had stopped the drifting of the ship. After the main engine had been repaired, the engine was used to ease the strain of the anchor and the chains by sailing at a slow speed against the wind and the sea.

14:10 The skipper ordered several of the crewmembers to go on deck and hoist the anchors. They started working on this task but were forced to halt and seek shelter at 14:29, since there were big waves hitting the ship. As a result, a few meters of the anchor chains had been hoisted. At the same time the vessel started to pitch.

14:40 When work on hoisting the anchors was to be resumed, it was discovered that the electromagnetic breaks on the anchor windlasses were damaged and an electrical generator on the port windlass was destroyed which made it impossible to weigh the anchors. It is highly probable that this was due to a mistake made at 14:29 when neither the breaks nor chain clamps were fastened. Due to the extensive movement of the ship, the electricity generator and the electromagnetic breaks could not endure the strain and broke. The decision was made to repair the breaks on the starboard side and cut the anchor chains on the port. At this point in time five shackles of the port anchor chain were dropped and six on the starboard side.

14:43 Four ICE-SAR teams were on alert and ready on shore. Everyone was concerned about the situation.

14:46 The Vikartindur crew informed the coast guard crew on Aegir that they were trying to hoist the anchors. The coast guard informed them that they were prepared to assist and requested that the Vikartindur crew alert immediately them if anything went wrong.

15:00 The wind in Eyrarbakki reached SW 8 and at 18:00 it reached 9 SW.

17:00 The main engine in the vessel was still running at the minimum speed in an attempt to ease the strain on the anchors and to keep the ship from drifting.

17:03 The Meteorological Institute's weather forecast again predicted a storm.

17:35 The vessel was approximately 1.8 nm from the shore. There were still five shackles dropped off the port side and six off the starboard side. The main engine continued to run on minimum power to ease the strain on the anchors. The starboard generator was on stand-by ready to hoist the anchor and the crew was ready to cut the port anchor chain.

At this point in time the chief engineer contacted the captain informing him that it was necessary to turn off the main engine because of the abnormal temperature of the exhaust released from cylinder 2. The chief engineer had made an error in his analysis of the exhaust temperature. In his opinion, an exhaust valve and a fuel injection needed to be replaced so that the main engine could be used. The chief engineer informed the captain that this repair would take approximately three hours. Since the captain thought that the anchors would

keep the ship from drifting and would keep it in a secure mooring condition, he decided that the main engine should be stopped so that the repair work could begin.

17:40 The Vikartindur crew informed the coast guard crew of the situation. The Aegir crew confirmed that they were on site.

18:13 The Aegir crew contacted the Vikartindur crew and informed them that the ship had begun to drag the anchor and was moving towards the shore. The Vikartindur captain was of a different opinion.

18:35 The Aegir crew said that something should be done as soon as possible, since it would be harder to take measures later and since darkness was falling and adverse weather conditions had been forecast. The captain continued to refuse any assistance, because he firmly believed that the ship was in a safe mooring condition. This message was forwarded to the Aegir captain, who reiterated that time was running out. At this point in time the weather report looked bad: southwesterly winds between 9–11, (21–31 m/sek) heavy intermittent hail and waves 7–9 m.

18:50 The equipment on Vikartindur indicated that the ship had started drifting shoreward at a speed of 2 to 2.5 knots. The main engine of the ship was not yet up and running again.

19:00 The skipper asked the Aegir to sail closer and assist by hooking up a towing line between the ships, taking Vikartindur in tow.

19:10/11 Aegir received the towing request from Vikartindur. By that time, darkness had fallen and the weather had gotten worse.

19:33 The first attempt was made to set up a towing cable between the ships, but it failed. When Aegir was about to make a second try, the ship received a breaker that caused it to tilt to one side and one of the crewmembers fell overboard and drowned. After this accident Aegir was forced to sail away, since the crew could not give the assistance that had been requested.

19:58 The Vikartindur captain calculated that the ship was 0.5 nm from shore. He received information that the main engine was still being repaired.

20:03 More anchor shackles were dropped in an effort to try to stop the ship from drifting, but to no avail. The ship's engine was still not in operation.

20:10 The Vikartindur skipper called the entire crew to the bridge. At about the same time the ship ran aground.

20:13 An international distress call on VHF was sent.

20:30 The Icelandic Coast Guard helicopter arrived and stationed over the ship it rescued the crewmembers from the ship. This operation was completed at 21:10.

21:00 The wind reached SW 10 (24–28 m/sek) in Eyrarbakki with intermittent snow and hail according to a report from the Meteorological Institute of Iceland.

22:10 The Director of the Office of Marine Environmental Protection contacts the ICG after listening to the evening news on the radio where it was reported that the Vikartindur had stranded. He inquired about the amount of oil and other dangerous substances aboard the

ship; however, there is no information available about this. Thus the ICG contacted the charter party and the shipping company in order to obtain this information.

The Eimskip, Ltd. contacted the oil distribution company, Oliudreifing, requesting oil transport trucks and pumps to recover the oil from the ship's tanks, should this be feasible.

## March 6

09:19 The head of the Marine Operations of Eimskip disclosed the estimated amount of fuel presumed to be onboard the Vikartindur, based on the available information at the last port, as well as the estimated consumption of fuel on the sailing route to Iceland. According to this estimate there were 300 tons of heavy fuel oil on board, 40 tons of diesel oil, and 5 tons of lubricating oil.

The insurance company of the vessel, the Standard Steamships' Owners Protection and Indemnity Association (Europe) Ltd., appointed an Icelandic marine architect (Olafur Briem) as their representative at the site. In conjunction, it is decided to send their representative from the consulting company Murray Fenton & Associates Ltd. to deal with matters related to the insurance company and to be in command of operations on the scene.

12:20 Eimskip submitted a "dangerous cargo list" which was requested by the ICG.

12:30 A staff member from the Office of Marine Environmental Protection together with a representative from the Sudurland Public Health Authority arrived at the site of the stranding to assess the situation. The weather conditions were extremely adverse: sleet and rain, and huge breakers with the extremely high breaking waves. The vessel was hitting the shore and there was a crack approximately 50 cm across the hull near the middle of the vessel. A great deal of rubbish had spread over the shore; several containers had fallen off the ship and were now on the shore amidst the goods that had formerly been contained. A number of spectators had arrived, but the authorities had not yet taken control over the area. Other staff members from the Office of Marine Environmental Protection began to obtain available data on the vessel and its cargo.

13:04 Eimskip submitted the cargo list to the Office of Environmental Protection, after being requested to do so. It was then discovered that several containers were marked as dangerous, according to the definition of the IMO, however the quantity of the substances did not amount to a dangerous level for the environment, even if spread. Yet some of these substances could be harmful for the humans when handling or being exposed to them.

In the evening it started snowing and the road conditions were bad and therefore the operation could not begin. Much of the equipment had arrived but some more was on the way.

## March 7

08:26 The Environment and Food Agency decided to seek the opinion of their Scandinavian cooperating parties in the Nordic Cooperation with regard to the usage of dispersants. They were informed that the viscosity of the oil was of such nature that dispersants would probably not be of much use.

08:40 The representative of Sudurland Public Health Authority called the Director of the Office of Marine Environmental Protection with regard to the cleanup, expressing his concern over the lack of traffic control. The Director, David Egilsson, tried to call the Deputy Secretary General /Director for the Office of Nature Conservation and Quality of Life, Ingimar Sigurdsson, in order to forward this message about the lack of traffic control.

09:5 Ingimar Sigurdsson called the Director of the Office of Marine Pollution Prevention and requested that he contact the District Magistrate, Fridjon Gudrödaron, about getting the traffic under control.

12:00 The Vice Chairman of the rescue team met with the Environmental and Food Agency in the Thykkvibaer community center, offering the aid of the rescue team during the cleanup operation.

12:30 A project meeting was held with the representatives of the owner's insurance company, representatives of the Sudurland Public Health Authority, and the Environmental and Food Agency. The owner's representatives explained the liability insurance of the vessel, while the Director of the Office of Marine Environmental Protection explained the relevant Icelandic law and regulations, emphasizing the position of the Sudurland Public Health Authority in relation to the cleanup of dangerous substances and rubbish on the shore. At the conclusion of the meeting, priorities were set for the salvage operation.

19:30 The representative of the owners of Vikartindur signed a contract with the Dutch contracting company Wijsmullers on the recovery of the oil. Equipment was mobilized and arrangements were made to fly it to Reykjavik and then transport it by road to the site of the shipwreck.

## **March 8**

13:00 The Deputy Secretary General /Director for the Office of Nature Conservation and Quality of Life, the Executive Director for Eimskip, and representatives from the Environmental and Food Agency met to discuss and review the legal aspects.

## **March 9**

A staff member from the Office of Marine Environmental Protection, the Executive of the Marine Accident Investigation Committee, and the inspector of the Icelandic Maritime Administration went to the site of the shipwreck, but were unable to go aboard. No salvage equipment had been transported to the site. Barrels with lubricating oil are drifting in the sea and there is the imminent danger of a container falling off the Vikartindur. The staff member of the Office of Marine Environmental Protection contacted the president of the rescue team.

The Minister for the Environment, the President of Committee of Environmental Affairs, and the Permanent Secretary visited the site.

11:00 The ICG notified the Environmental and Food Agency that the vessel Disarfell went down midway between Iceland and the Faroe Islands. It is believed that nothing can be done about the pollution.

### **March 10**

Workers from the salvage company Wijsmullers welded steps along the hull of the ship. No one was permitted to go on board, even though the day before, authorization to go aboard had been issued for those working on the recovery of oil. Access was not granted due to custom and inspection issues.

At the initiative of the Director of the Office of Marine Environmental Protection, a consultative meeting with interested parties was held.

The Office of Marine Environmental Protection and the Ministry for the Environment met to review the law and regulations pertaining to incidents of this kind. The authorities involved in the case determined the principal division of work.

The representative of the insurance company made an announcement.

### **March 12**

The Office of Marine Environmental Protection held a meeting in the village of Selfoss with the local parties, and the local residents were informed about the authorities' and the salvage parties' assessment of the situation.

14:00 The pumping of oil, mostly diesel oil, began. It was decided to keep the diesel oil running in the hose so that the heavy fuel oil would not go below the pouring point. Pumping the heavy fuel oil with the pumps that were meant for the job did not work because the oil had become too viscid. Nor did it work to mix it with diesel oil, so it was decided to heat the heavy fuel oil. The supervisor from Wijsmeller indicated that they needed a boiler with a capacity of 1000–1200 kg/hour. A staff member from the Office of Marine Environmental Protection found out from the company Kemihydro that a boiler of this size was available at Isplast in the town of Hafnarfjörður, and that it was not currently in use. He notified EM Fokko, and the contractor arrived to place a bid for the boiler.

The shipyard Velsmidja O & V had been approach and they had indicated there were two boilers available, one immediately and other to be made ready. A third boiler was identified, but the information regarding its availability indicated that it would not be available for some time as it was “being sold.”

The delay in heating the heavy fuel oil did not prevent the proceedings around removing the oil. While the heaters were being mobilized, the pumping of diesel and lubricating oils continued when circumstances allowed.

### **March 14**

The Director of the National Defense of Iceland, members of the Committee for the Prevention and Response on Acute Marine Pollution, representatives of the owners and those of the insurance company, as well as staff members of the Environmental and Food Agency flew over the site.

The boiler that was supposed to arrive that day was delayed and was predicted to arrive the following day.



### **March 15**

A boiler rented from the shipyard Vélsmidja Orms og Viglundar arrived. Due to installation problems, the boiler was not started until Sunday morning at 4:00 am.

### **March 16**

The boiler had merely a capacity for heating 100 – 130 kg/hour; thus, the heating took a very long time.

### **March 17**

After hearing of the boiler's low capacity, a staff member from the Office of Marine Environmental Protection decided to personally help get the boiler from Isplast.

### **March 18**

Work began on recovering the heavy fuel oil from the ship.

### **March 20**

In the early morning the new boilers from Holland and Iceland arrived. Yet they were not started until late evening because of a few logistics problems and an inspection by the Icelandic Ministry of Occupational Health and Safety.

### **March 24**

The connection cable that was set up between the shore and the ship was broken in a forceful storm. More oil became apparent in the vicinity of the ship, but the jetsam reached all the way to the Stokkseyri coast.

### **April 6**

The Environmental and Food Agency of Iceland finished their tasks at the stranding site and the risk of an oil spill had passed.

PART III  
CONCLUDING REMARKS



# Chapter 6

## Findings, Conclusions, and Propositions

*Asthildur E. Bernhardsdottir and Lina M. Svedin*

### *Introduction*

In the following chapter we revisit, in turn, the questions posed in the introduction regarding the nature of crisis management in a small state. The empirical findings from three case studies are compared to the findings in the 1995 Icelandic avalanche cases (Bernhardsdottir, 2001). Many of the conclusions to our initial research questions do not match the research findings and assumptions about small states made by other scholars. In an effort to provide alternative explanations and theoretical links to these inconsistent findings, we introduced a crisis culture perspective. When we reexamined the unexpected results of the case studies, we made comparisons with Swedish crisis cases (Sundelius, Stern, and Bynander, 1997) and explored to what extent national culture, as opposed to being a small state, can explain these two state's crisis management styles. The chapter ends with a set of propositions about crisis management in small states that can be used for further research.

### *Decision Units and Administrative Crisis Processes*

In the introduction we posed a number of questions regarding Icelandic decision units and, more broadly, Icelandic administrative crisis processes. The first research question we posed was:

- *Is there a clear division of authority and responsibility among the different levels of government?*

Contrary to what this question might suggest, we found that the lines of authority and responsibility were blurred in Icelandic responses to crises. For instance, the avalanche disaster in Sudavik in 1995 (Bernhardsdottir, 2001) brought into focus the complex administrative system involved in avalanche response. In this case, one Minister was responsible for the performance of risk assessments while another was held responsible for crisis preparedness. A third Minister was responsible for supervising and collecting data on the occurrence of avalanches.

In the responses to the Vikartindur stranding, two Ministries needed to turn to legal experts in order to get clarification on the Government's lawful rights and obligations concerning a stranding of a vessel. The division of authority and responsibility becomes complicated when functions are divided, shared, and transferred between several ministries and agencies. A case in point was the establishment of the Ministry for the Environment in 1990, which involved the transfer and consolidation of tasks from six other ministries. Laws were adjusted to fit the new organizational format but the laws still remain vague on the issue of responsi-

bility and authority during crises. The lack of a general framework for responding to pollution episodes and the need for harmonizing action was salient during the Vikartindur crisis. Another dimension in the administrative crisis process that is unclear in Icelandic legislation is the right of the country to intervene in potentially disastrous situations. The right to intervene in waters regulated by International Law (International Convention, 1989) is more extensive than the rights in the domestic Icelandic legislation. By ratifying such International Laws, Icelanders would have the same right to respond within their territorial waters.

In the Vikartindur case the complexity of the administrative responsibilities was clearly illustrated with regards to the recovery and cleanup at the wreckage site. At a meeting held by the Office of Marine Environmental Protection a few days into the crisis, it became clear that the municipality in which the wreck lay was responsible for matters related to the cleanup of hazardous materials and debris drifting to shore as well as the removal of the shipwreck according to Icelandic legislation. In such cases, the national government is to manage the response to environmental pollution. However, the actors had accepted tenders for the task of recovering the oil, and the job was given to a private Dutch consulting company. The Office of Marine Environmental Protection inspected these activities. The owners of the ship were held responsible for the cleanup costs incurred by the Icelandic government and had to sign an agreement stating that they would honor their financial responsibility in accordance with Icelandic legislation and the 'polluter pays' principle.

Another finding on the Icelandic administrative process during crises is that the law on civil defense does not regulate the relationship between the local civil defense committees and the local political administrations. At times this has led to conflict, a lack of communication, and general confusion about the division of responsibilities and authority. The different goals and time perspectives of the local actors often result in different priorities, which have to be negotiated and coordinated (to the extent that they manage to coordinate their efforts at all). The need to clearly define the role of the local governments during crises became evident in the response to the 2000 earthquakes. Among other things, the local governments in Iceland are responsible for operating community services such as water, electricity, roads, schools and so forth. If these services are damaged or affected by a disaster, the local governments must respond quickly to restore them.

The crisis cases in this volume have illustrated the need for an emergency response plan that will define the role of the local government during the immediate response phase and its relation to the rescue and relief effort of the national civil defense. Furthermore, questions still need to be addressed on how local governments can coordinate their efforts with civil defense operations as well as what the role of the local governments should be after the civil defense forces have terminated their operations. It is also worthwhile to note that in Iceland individual initiatives play a particularly salient role in crisis operations, as was the case in the response to the 1995 avalanches. Individuals at the local level often take the initiative when the local civil defense committees are paralyzed or are not reacting quick enough.

In short, the answer to our original question is Iceland does not have a clear division of authority and responsibility between governmental institutions during crises. However, this does not appear to be a unique Icelandic administrative feature. Recent findings on crisis management in Slovenia show how "preparation and interventions in many [crisis] cases were characterized by ad-hoc decision-making structured and improvisation" (Brändström and Malesic, 2004: 351) For instance, if we look at Sweden, as portrayed in Sundelius, Stern and Bynander (1997), we find that the crisis decision units not only tend to be small in size but



they are often put together in an ad-hoc fashion in times of crises. Because Swedish crisis decision groups often have this temporal and unique nature, they typically lack the kind of sanctioned authority that is desirable when making critical policy decisions. Sweden also has a tradition of mixing crisis decision groups (including politicians and civil servants). Thus, implementation is more efficient and effective, but at the cost of accountability as the processes of these ad-hoc groups are complex and do not take place in established public arenas. As evident in both Icelandic and Swedish crisis cases, the division of authority and responsibility are obscured. One of the contrasts between the administrative processes in these two countries is the fact that Sweden tends to have mixed decision groups, and the traditional distinction between these two spheres is typically more prominent in Iceland. Furthermore, individuals in Iceland tend to take more initiative in crisis operations when the formally authorized crisis decision units do not seem to be functioning.

The second research question on decision units and crisis administrative processes that we posed, was the following:

- *Are there clear mechanisms for upscaling and downscaling responses within the system based on ample experience and opportunities so that civil defense experiences can be fine-tuned?*

Placed in the Icelandic context, the assumption that governmental crisis decision making often becomes highly centralized (‘t Hart, Rosenthal, and Kouzmin, 1993) gained little support in our findings. This was only true in one case, the fishmeal crisis. This case did reveal how quickly a crisis can move up the decision-making hierarchy in a small and relatively informal state administration. This upscaling mechanism was triggered by two events. First, the Icelandic Association of Fishmeal Manufacturers alerted the Ministry of Fisheries of the French and German unilateral fishmeal bans. Secondly, the Icelandic Minister of Foreign Affairs received similar information from a concerned fishmeal producer via a telephone call (Thorhallsson and Ellertsdottir, Chapter 4 of this volume). It is clear that the initiative of individuals can have a much greater impact on the trajectory of a crisis in an open and flexible administration, where government decision makers can easily be reached by phone. Once the problem had reached the central government, the response and the key decisions made were performed by a small group of top-level officials: the Minister of Foreign Affairs, the Permanent Secretary of State, a member of the External Trade Department, and the Icelandic Ambassador in Brussels. This ad-hoc group was formed shortly after the Government received information about the French and German actions and the proposed EU measures. This supports the findings of Sundelius, Stern, and Bynander (1997) on the propensity of small states to form ad-hoc decision groups with informal working practices.

In conclusion, we found little in terms of well-developed formal procedures for upscaling and downscaling responses to Icelandic crises. Once the decision process landed at the national government level, the administration seemed to be able to quickly form a response and successfully cope with the situation. It is worth noting here that the national level decision makers did not react to the media pressure, which is most often the case. Rather, the stakeholders were able to win the attention of the national level with direct personal interaction instead of using the media to channel and amplify their concerns. The national decision makers reacted by creating an ad-hoc group which then formulated a strategy and initiated action rather than using formal decision making in a routine and planned manner.

We also posed the question in the introduction whether:

- *Does the Icelandic administrative system emphasize centralization rather than decentralization in responding to crises in order to facilitate coordination and resource mobilization?*

The civil defense system in Iceland actually emphasizes decentralization in terms of responding to disasters, and operations are often delegated to local civil defense committees. AVRIK (the national civil defense organization) serves in a coordinating function during the acute crisis phase. The members of the local civil defense committees, however, have many roles to play in a disaster situation. The committee members are appointed because they work and are familiar with the issue of safety and the well being of the community under 'normal' circumstances. As physicians, fire fighters and other local professionals, these members often experience conflicting priorities in acute situations. As illustrated in the earthquake case, the committee members were needed in the field and at the same time they were required to participate in the local crisis decision-making committee. Eight local committees responded to the earthquakes and there was extensive information processing. The fact that the two earthquakes hit two different counties provides a good point of comparison. While one county only had one civil defense committee, the other county had several committees. The chief of police who only had to supervise one committee proved to have a much better overview of what was happening in his entire district. This experience supports the assertion that it is more effective to have one emergency operational command within each police district (Bernhardsdottir and Thorvaldsdottir, 2002). The earthquake case also clearly illustrates how the emphasis on a decentralized crisis management system can become an obstacle for quick responses and coordination efforts during a disaster.

The cases in this volume have shown that the critical link between the local and the national level in the Icelandic civil defense system is particularly vulnerable. Problems arise if, or when, disagreements develop between local units and the national civil defense organization responsible for coordinating the districts' efforts. If these conflicts cannot be resolved, the only alternative is to defer the decision to the Minister of Justice, who will then have the final say in the matter. Thus in this two level hierarchy, the question is where the expertise on the relevant issues and the actual situation is. This is a common crisis management dilemma in administrative systems where the authority to make decisions and the responsibility for the crisis response is divided between local and higher administrative units.

A parallel example, further illustrating this dilemma, can be found in the Swedish police organization regarding the management of the 1994-1997 biker war (Svedin, 1998). In this case the regional police chiefs were autonomous in making decisions and information sharing. The national police, however, had the responsibility for formulating the national strategy for dealing with biker related incidents and crime. The national police organization had to wait for a request from the individual police chiefs in order to intervene or provide assistance, and this made coordinating a national response an almost impossible task. The coordination and communication difficulties resulting from the divided crisis management responsibilities created organizational fatigue, and additional lives were lost as the crisis dragged on.

Local civil defense and crisis management teams are often victims themselves of a disaster or crisis; at the same time they are trying to deal with the situation at hand. They are in many ways forced to be in two places at once. This raises questions about the balance between having local people in charge who are familiar with the situation and are knowledgeable, and the need to have management and coordination capacity at higher levels of the administration. Issues of centralization and decentralization, and upscaling and downscaling often become piv-

otal and thorny in crisis situations (t'Hart, Rosenthal, and Kouzmin, 1993). The earthquake case in this volume illustrates how a highly decentralized system became vulnerable when the local civil defense committee members struggled to fulfill their professional duties while at the same time preoccupied with the personal losses they and their families were facing. In the avalanche cases (Bernhardsdottir, 2001), the local committees were non-functional as many of the committee members were personally affected by the avalanches. In fact in Sudavik the local civil defense's emergency operation center was buried beneath the avalanche, which paralyzed the work of the committee.

There are numerous other examples in the CRISMART case bank of situations where local decision makers, tasked with handling crises, have been seriously strained after also becoming crisis victims. One example is the Red River flood in 1997, where the local civil defense staff (MEMO) was shuttling between meetings at the coordination center in Winnipeg and their homes in the southern part of the city in order to sandbag their homes (Svedin, 1999). Another example is the Auckland power outage in 1997. The City Council and the Mayor of Auckland found their offices without power; thus, they did not have access to vital information stored in their computers, which they needed to manage the crisis (Newlove, Stern and Svedin, 2000).

The Icelandic government's strong belief in the decentralized civil defense system was evident from the Prime Minister's reaction to the rescue operations after the Sudavik avalanche. Here he emphasized the paramount importance of following the National Civil Defense organization's plans for the rescue operation; that is, allowing the local units to run the rescue operation with AVRIK coordinating help from other places in the country. He also expressed how urgent it was to resist the temptation to interrupt the emergency efforts since they were progressing at a steady pace (Bernhardsdottir, 2001). Likewise, the Government chose not to interfere in the local rescue operations in the earthquake case or in the wake of the Vikartindur stranding .

When revisiting the question about centralization versus decentralization and its possible advantages in a small state administration, a number of things become evident with regard to Icelandic crisis management. While the responsibility and organization for responding to crises is formally decentralized and has a firm commitment from the Government, this system has serious drawbacks. The number of local disaster committees in any given region varies. Ironically, findings revealed that having only one committee in a region (with more centralized management in the region) was most advantageous in terms of coordination, resource allocation and information management. Furthermore, while it is logical from a symbolic and managerial point of view to have key staff members on the civil defense committees, this has actually proven to be one of the decentralized system's fragile points. From a technical and operational perspective this administrative structure pulls key people away from their organizations when they are most needed in the field, not to mention the psychological strain this poses on these professionals who face split responsibilities and priorities. A second fragile point in this decentralized system is the link between the local and the national levels; there seems to be a great deal of uncertainty about who has the final say in a crisis and there are few ways to efficiently resolve such conflicts.

## *Preparedness and Mitigation*

With regard to Icelandic crisis preparedness and mitigation we felt compelled to pose the following research questions:

- *Does Iceland have well-developed detection and early warning systems for natural disasters (such as earthquakes, fires, floods, storms)?*
- *Do Icelandic communities have a high level of preparedness due to the frequency and risk of disasters?*

Marine accidents have taken the highest toll of human lives in Iceland. Tragic accidents at sea and efforts to prevent or mitigate them seem to have drawn the public's attention from other kinds of hazards. Subsequently, the public's attention has driven the fact that several marine risk regulations have been established. Like Hood, Rothstein and Baldwin (2001) point out, risk domains vary widely in terms of the level of concern they generate with the public.

Indeed, the Icelandic crisis managers were faced with an accident at sea during the Vikartindur crisis, as well as environmental pollution. It quickly became evident that Icelanders were far better prepared to deal with an accident at sea than environmental pollution. The existing practices, coordination plans, and information processing within the Coast Guard and the National Life Association proved to be valuable during the operations. The environmental protection operations on the other hand were poorly prepared, which reflects the fact that environmental protection issues have only recently gained importance in Iceland.

A great source of post-crisis stress is often the financial dispute about who pays and receives disaster compensation or aid (Raphael, 1986:27). Icelanders have eliminated such disputes by directly earmarking a percentage of Icelandic taxes for a disaster insurance fund for victims of natural disasters. Contribution to the disaster insurance fund is obligatory. While innovative, the notion of disaster insurance raises questions about what should be considered a natural versus a human-made disaster.

With regard to preparedness and mitigation in small communities, the avalanche and earthquake cases showed that overall participation in volunteer disaster organizations (e.g., rescue teams and IRC) in Iceland is extensive. The significance of such volunteer work in supporting community preparedness is indisputable. Furthermore, it serves to increase public awareness about disasters, disaster management, and crises in general.

At the same time there is a high level of preparedness at the local level in terms of volunteer organizations, a certain degree of reluctance is evident in the actual planning for disasters. There was a lack of local information on previous avalanches given to the Icelandic Meteorological Office and this was one of the reasons why the risk assessments for Sudavik and Flateyri were so inaccurate (Bernhardsdottir, 2001). The avalanche case also highlighted the fact that Iceland lacks an effective and efficient system for monitoring avalanche activity and for warning residents of developing threats. The shortage of financial resources was first and foremost to blame. Thus, in the wake of the avalanche disasters, the Meteorological Office was ensured more resources for monitoring avalanches and planning for different kinds of disasters (for instance, improving the surveillance of earthquakes and volcanic activity) (Bernhardsdottir, 2001).

Icelanders have also shown a reluctance to face the threat of other dangers. It had been known for more than fifteen years that a major earthquake was expected to hit the exact area



where the 2000 earthquake occurred. Icelanders are generally conscientious about following the country's building codes, which are aimed at making residential buildings earthquake-safe. Yet, there was great variation in how well prepared the residents were for an earthquake. In the 2000 earthquakes, it became apparent that the authorities' efforts to educate the residents about what to do in the event of an earthquake had had a limited impact. It seems that even in countries like Iceland, where there is a high probability of high-impact disasters, people still display the 'it can't happen here' mentality, which is so prevalent among citizens and decision makers in more fortunate societies (c.f. Raphael, 1986:30). In the words of one Icelandic official, "It has always been that way with natural disasters, here in Iceland, that people don't discuss them much" (Gudrodarson, 2001). People quickly sweep the notion of a disaster, like the earthquakes of 2000, out of their minds even though the likelihood of another devastating earthquake is more than likely, he argues. This raises troubling questions for the authorities on how to educate and keep residents alert in the medium to long term.

Summing up, it does seem that Iceland has a well-developed detection and early warning system for natural disasters and that Icelandic communities have a relatively high level of preparedness due to the frequency and risk of disasters. However, there seems to be a difference between the level of preparedness and capacity to mitigate crises at the operational level (the Vikartindur stranding, the 2000 earthquakes, and the 1995 avalanches) and on the strategic level (the fishmeal crisis). Albeit to a varying degree, Iceland seems to have a higher level of preparedness and ability to mitigate operational crises than strategic crises. Iceland has good systems and procedures in place for detecting and responding certain types of disasters, particularly accidents at sea and sea rescue operations. In other areas, such monitoring avalanches, earthquakes and volcanic activity, improvements have recently been made.

Interestingly enough, there are some strong paradoxes in the fact that Icelanders still choose to live in clearly disaster prone areas. One could argue that this is the toll they have to pay for living in such a hazardous country. Governmental organizations and the general public seem to deny these risks and maintain an 'it cannot happen here' mentality. The Icelandic public is committed to organizing rescue activities with large and diverse volunteer corps, and at the same time people have chosen to build their homes with little concern for natural hazards. Government organizations put structures in place for dealing with disasters but at the same time do not follow through by reporting and documenting the management of previous disasters. This is an interesting psychological phenomenon, with clear implications for preparedness; it is difficult to manage and therefore particularly important (but potentially even harder to address) in societies facing a great likelihood of high impact disasters.

We also posed a research question on preparedness and mitigation with regard to crises in Iceland's political and economic environment:

- *Is Iceland closely following the developments in key external environments (like the EU and the US), and has the administration developed reporting mechanisms that will enable the government to detect signs of potential threats in these areas and quickly mobilize mitigative responses to developing crises?*

In the fishmeal case, the lack of information and feedback from the Icelandic Embassies in Paris and Berlin to the national government was noticeable. The Embassies seemed to have underestimated the public's fears and outcry over the new cases of BSE in the EU, and they did not seem worried about Germany and France's proposed ban on fishmeal in animal



feed. As a result, the Icelandic administration was not at all aware that the German and French governments were trying to lobby the Commission to ban fishmeal in animal feed. The situation was particularly urgent since at that time France held the Presidency and was in a unique position to influence the Commission's work (Thorhallsson and Ellertsdottir, Chapter 4 of this volume)

Despite the fact that the Commission had discussed a possible ban on fishmeal two years earlier, this was not brought to the Icelandic administration's attention. The administration was inattentive to the fact that these discussions may come up again with the initiation of the French ban. Important strategic lessons had been missed. The administration did not increase the role or the size of the Icelandic representation to the Commission after the 1997-1999 discussions on banning fishmeal in animal feed. Nor were there any systematic efforts to increase information gathering within the Commission or in the EU member states, especially those with a particular interest in fishery (such as Spain and Portugal). In fact, there are still no Icelandic Embassies or representatives in these two countries. Nor did the Icelandic administration try to increase their leverage in EU decision making on animal feed after the 1997-1999 experience, even though increased influence would have clearly been important to them in the event of a future discussion.

The lack of preparedness in dealing with animal feed or an animal health crisis, despite the warning signs a few years earlier, reveals that the administration had weak crisis preparedness in international trade and transboundary problems. Like with domestic natural disasters, the Icelandic administration failed to follow through, document experiences, and incorporate them into their plans for future crisis management. Even though it is hard to draw any firm conclusions from one case study (that is, from the fishmeal case), there seems to be some similarities in the way the Icelandic administration dealt with several of the crisis experiences and it would be worthwhile exploring why there was poor follow-up in the crisis aftermath.

### *Crisis Communication and Information Management*

The questions we posed in the beginning of this volume regarding crisis communication and information processes were the following:

- *Does Iceland use primarily informal networks of communication, and informal and pragmatic decision making during crises?*
- *Does Iceland's small administration, with a greater degree of familiarity among decision makers and relatively short channels of information in the administration as a whole, create clear information processing in crises?*
- *Does the expected high level of familiarity among Icelandic officials facilitate the crisis management effort by speeding up the decision-making process, enabling informal authorization, and providing high levels of trust for collective administrative actions?*

The lack of information was common in all of the Icelandic cases. This deficiency affected all stages of the crisis management process. The importance of information gathering for risk regulation is indisputable when issues of probability and potential impact are in question (Hood, Rothstein, and Baldwin, 2001). In the prevention and preparedness phase, the risk of avalanches was undervalued because of the lack of information on previous avalanches (Bern-

hardsdottir, 2001). The fact that no one was given responsibility of coordinating and gathering information on the damages caused by earthquakes in 2000 also shows a lack of awareness for the important role information gathering plays in crisis preparedness.

The lack of information was also apparent in the response phase of these crises. Eight civil defense committees were activated after the earthquakes, and information was needed from every committee, from neighboring committees, and AVRIK. The specific nature of earthquakes means that the effects of such disasters are spread over a large area. In Iceland, more than half of the population lives in the southern part of the country, i.e. in the area where the earthquakes took place. Understandably, the public's demand for information about earthquakes is intense. The lack of information processing can in part be attributed to technical issues, such as incompatible telephone and computer systems and the lack of a clear information channel (Bernhardsdottir and Thorvaldsdottir, 2002).

The same was observed in the Vikartindur crisis. A lack of clear information regarding the role of the various parties within the administration and which communication channels should be used caused delays in the operations. It should be noted, however, that information during the Vikartindur operation was disseminated much more efficiently with regard to rescuing the crewmembers and the ship than with regard to protecting the environment, which is consistent with the emphasis Icelanders put on preparing for accidents at sea (Bernhardsdottir and Gudmundsdottir, Chapter 5 of this volume).

Furthermore, in the fishmeal case, the Foreign Service did not provide sufficient information about the proposed ban. The warning signs should have been identified earlier and, consequently, this delay cost valuable preparation time. Nevertheless, once the crisis was recognized, the information processing was swift and effective. Clear information channels and sophisticated technology made it possible for the administration to cope with the crisis by activating its staff and responding relatively quickly (Thorhallsson and Ellertsdottir, Chapter 4 of this volume). The response phase in the fishmeal case illustrates how the smallness of the Icelandic administration resulted in short information channels and flexibility. It should be noted that despite the lack of clarity in information processing during the preparedness and response phase of the disasters, a clear sign of flexibility was seen. The Sudavik avalanche case, for instance, provides striking evidence for how individuals become creative in their information processing in the face of terribly difficult circumstances (Bernhardsdottir, 2001).

The flow of information in the crises studied often originated from private actors with a vested interest in the crisis, rather than from the Ministries. For example, information about how to deal with the French fishmeal ban was sent to the Ministry of Fisheries by the Icelandic Association of Fishmeal Manufacturers.

Furthermore, the Ministry of Foreign Affairs and the embassy staff were allowed to see all of the information that the Ministry of Fisheries had on the case in the Lotus GoPro data and communications system.<sup>1</sup> This provided a good base for working on and coordinating the response to the crisis.

In addition, the Ministry of Foreign Affairs also attempted to influence the EU decision makers through the media. This strategy, which involved sending press releases highlighting the importance of the case to major European newspapers, failed completely. The newspapers

---

<sup>1</sup> This computer system included email, minutes, and notes between the Ministry officials and individuals outside of the Ministry on issues regarding the case. Internal embassy reports were also made available to the other ministry officials through this system.

did not respond to the information and this was attributed to the large number of press releases sent to the papers and the fact that the Icelandic decision makers had not had much previous contact with the journalists (Thorhallsson and Ellertsdottir, Chapter 4 of this volume).

With regards to the role of the media in crisis communication, the Icelandic National Television and National Radio made a symbolically important transgression. On June 17, Icelandic television was broadcasting a live soccer game when the earthquake occurred. The evening news was delayed because of the football game and people felt that it would have been prudent to interrupt the broadcast of the game to quickly relay the news of the earthquake. The independent television station, Channel Two, was quick to get to the site and start broadcasting news from Selfoss (Thorarinsdottir, 2001: 246). The National TV and Radio company (RUV) thereby lost credibility to their competitors and the company was criticized in the aftermath of this crisis (Arnadottir and Eydal, Chapter 3 of this volume).

The RUV was also criticized for publishing incorrect information from the Meteorological Office on the size of the first earthquake, which was lower than the actual earthquake. The public felt that they had been given a false sense of security at the time when everyone was frantically looking for information to calm their worries and adapt coping strategies. Interestingly, in many other crises decision makers and public officials often walk into this kind of credibility trap by presenting a rosy scenario of what the crisis will entail and thereby making themselves vulnerable to a backlash. For instance, in the Auckland power outage, the energy company lost the public's trust and experienced severe criticism when their prognosis of how long it would take to fix the broken cables and restore the power had to continuously be pushed forward (Newlove, Stern and Svedin, 2000). In conclusion, we saw in the earthquake case the media working as a trusted provider of vital information and also as an important medium interpreting the situation at hand, and thereby shaping people's perception of the situation and the severity of the risks involved.

The Vikartindur case also shows the symbolic importance of appearing in the media and having prepared a media strategy. The Minister for the Environment was abroad on the day of the stranding but he was criticized for having visited the stranding site three days after the incident. Anecdotally, the Minister's experience in this case was similar to that of President Putin in the case of the sunken Kursk submarine (Minaeva and Nohrstedt, 2002). The Icelandic Minister for the Environment lost the information initiative when he assumed that environmental issues would be discussed when things had calmed down a bit. He had expected those people who wanted information on the environmental situation to come to him and didn't feel he needed to take the initiative himself.

When the Ministry started receiving inquiries about the environmental conditions at the site and about the environmental response, it became clear to the public servants that it would be necessary for their boss to be more preemptive and appear on site. When the Minister arrived at the stranding site, the media jumped on the opportunity to directly ask questions to the Minister; questions that he was only partly able to answer. Furthermore, by failing to use this opportunity to explain in detail the division of responsibilities among the Ministries, he walked into a credibility trap. Later other officials in media interviews tried to repair this damage by emphasizing and clarifying the division of labor, but the media had already found an easy target and would not settle for any other spokesperson. The interview with the Minister in front of the stranding site was most likely one of the decisive factors that made him the symbolic representative of what the public and the media regarded as slow and

poorly managed clean-up operations (Bernhardsdottir and Gudmundsdottir, Chapter 5 of this volume). Generally speaking, those in charge of managing the stranding crisis did not use the media to their advantage.

### *Cooperation and Conflict – Public and Private Partnerships*

Research has shown (Katzenstein, 1985) that strong corporatism and concentrated economic interests in small states tend to shape their actions on the international arena. While Iceland traditionally has been less corporatist than its other Scandinavian neighbors, the trend toward corporatism has been accentuated since the beginning of the 1990s. The smallness of the Icelandic administration has meant that the Government depends on interest groups to provide information for policy making. The ministries work closely with specific sectors, like the fishing and farming industries, in forming policies.

Regarding the relation and potential for cooperation and conflict between public and private sector actors in Icelandic crisis management, we posed the following research question:

- *Does the high visibility of Icelandic state officials and private companies' relative importance in Iceland promote cooperation between public and private actors in crises, even in situations where no formal relationship has been established?*

The fishmeal case highlights this close relationship between the Icelandic administration and the private sector interest groups. The Icelandic Association for Fishmeal Manufacturers and individual fishmeal producers played a key role in informing the Ministry of Fisheries about the proposed EU ban on fishmeal and the impending Icelandic crisis. Even though they did not provide very specific information, their initiative sparked government action and consequently a response. The Icelandic Association for Fishmeal Manufacturers continued to work closely with the administration throughout the crisis providing the Government with much needed information, and it participated in decision making from the outset of the crisis. The vested interest of private manufacturers in this case turned out to be a considerable asset and the association was a key partner for the Government in helping it reach its larger goal of protecting the Icelandic economy.

In the Vikartindur case, the fact that the shipping company and the captain were private actors left the Icelandic administration with its hands tied. The company called the shots even when significant values were at stake for the Icelandic population. The administration could not override the international practice of granting the ship's captain with the final decision on how to handle the developing situation. The shipping company initiated the process by informing the authorities of the impending danger. Hence a private company became the primary decision maker with regard to assessing the need for a rescue operation. Likewise, the shipping company's representative was the predominant leader at the stranding site during the first responses.

In the Vikartindur case, conflicts also arose between the private actors. At the outset of the stranding, it was assumed that the cargo company (Eimskip) and the representatives of the Vikartindur's insurance company would have a joint interest in rescuing the cargo as quickly as possible, but their actions soon proved the contrary. The insurance company



threatened to walk out of a county magistrate meeting if Eimskip's lawyer was allowed to be present. The cargo company was seen as taking a dominating position in the first stages of the responses. This was followed by numerous attempts from different ministries and agencies to resume control of the meeting and the crisis management planning. The first few days of the stranding were characterized by chaos as a host of parties offered to help but their offers had been turned down by the shipping company. Ideas on how to salvage the wreck were bounced back and forth between the actors, and the legal issues were ironed out.

Another significant difference between public and private sector crisis management was revealed by the manner in which the ship's crew was treated in connection with the Vikartindur stranding. The shipping company in Hamburg asked their employees not to speak to the press about the events surrounding the stranding. In the Vikartindur case, the information processing and communication seemed to be characterized by strong centralization within the company and small group decision making. Furthermore, the company even claimed ownership of their employees' experiences and right to speak on anything related to the crisis.

Another issue raised by public and private sector crisis management is the issue of insurance. In the earthquake case, the National Disaster Insurance Fund was a key actor in getting households through the recovery phase (Arnadottir and Eydal, Chapter 3 of this volume). The Board of the National Disaster Insurance Fund has five members: three of them are appointed by the Parliament, one is appointed by the insurance companies who are responsible for the collection of the taxes, and the Minister for Industry and Commerce appoints a Chairman of the Board (Act no. 55/1992: Article 2). In short, insurance affairs are governed and funds are collected through the public and the private sectors.

In the Vikartindur case, the issue of insurance became a concern for the public and private parties already at the beginning of the crisis. The often-debated topic of a salvage fund and whether this money stands in the way of requests for rescue assistance gained new life with the Vikartindur case. The shipping company would have been faced with higher insurance premiums had it accepted being rescued. The shipping company had constant contact with the captain after the engine failed and instructed him to strike a deal with the coast guard vessel if conditions deteriorated. Simultaneously, the shipping company tried to cut a deal with the Icelandic Coast Guard on a sum for salvage money, should the captain request assistance. Making deals on salvage money before a rescue is against Icelandic law, since the moral reasoning is that a party should not be trying to strike a bargain when danger is escalating.

In the earthquake case, the carrier company (reporting to its insurance company back home) had very different considerations and priorities from those of the residents in the South Lowlands in the aftermath of the earthquakes. The stakes for the parties facing the insurance companies in the earthquake versus the stranding were primarily different because of the different roles that the insurance companies played in each case.

While the private sector played a smaller role in the avalanche cases (Bernhardsdottir, 2001), the sensitive role of outsourcing the civil defense sector still created some turbulence in the public sector. A private engineering consultant firm had been put in charge of overseeing the avalanche risk assessments on behalf of AVRIK. In the aftermath of the avalanches, the authorities questioned the appropriateness of having such assessments contracted out to a private actor. As a result of the disaster and the discussions that followed, the avalanche assessment function has since been taken over by the Meteorological Office (a public institution).



The second question we posed regarding cooperation and conflict was whether:

- Do the scarcity of resources in the Icelandic administration and the shadow of future budget negotiations generate bureaucratic infighting and blame games in times of crises?

The lack of resources was apparent in the Icelandic cases, particularly in the 1995 West Fjord avalanches and in the Vikartindur stranding. There were signs of irritation and conflicts, yet we cannot assert that these were attributed to the lack of resources or the competition surrounding the allocation of state funds. Poor planning, inadequate information, and an unclear division of responsibilities often trigger conflicts. Similar experiences were revealed in the Slovenian crisis cases with regard to crisis preparedness and information management (Brändström and Malesic, 2004: 349). In the Slovenian earthquake and flood cases, conflict and friction were caused by the lack of contingency planning, rather than by bureaucratic competition between the agencies on the ground.

However in the Icelandic context, we should mention that budget negotiations between the national level and local level have been ongoing for several years. The national government has the power to officially oblige a local government to pay for a rescue operation. Such conflicts originated from the country's "air defense war" during World War II when the Director of the Reykjavik Fire Brigade argued that the air defense should be under his control at the local level. The town council, which was concerned about the costs the Government was forcing upon Reykjavik, supported his view (Whitehead, 1999).

During an operation, the Chief of Police is in charge and is directly under the Minister of Justice. His/her salary is paid by the Government. According to the law, the Chief of Police can oblige any community in his/her district to pay for a rescue operation (Bernhardsdottir, 2001). Such conflicts did not appear in any of the case studies analyzed in this volume. In the Vikartindur case, the Chief of Police did not oblige the small community of Djupar to take on the full financial responsibility of the stranding site, knowing it was beyond the ability of the community (Bernhardsdottir and Gudmundsdottir, Chapter 5 of this volume).

On the basis of the case studies, we can only suggest a few plausible reasons for why the lack of resources and future budget negotiations do not generate more bureaucratic infighting and blame games between the different parties/agencies during a crisis in Iceland. One reason may be that Icelanders are not used to scrutinizing major crisis operations; that is, the decision-making processes have not been systematically evaluated in the crisis aftermath. Furthermore, the sentiment of the Icelandic public does not include forcing individuals to leave their jobs after making a mistake. Icelanders have shown considerable tolerance in this regard, although there are signs today that this is changing. 'Whistle-blowing' is generally disliked and people who expose co-workers' wrongdoings are far from rewarded in terms of public support. This lax approach to scrutiny may possibly lead to a certain kind of mindlessness, which can work as a great disadvantage in preparing for crises. Some of the advantages of this attitude are that individuals are likely to be less defensive, and more trust can be developed between people facilitating cooperation and coordination.

## *Internationalization and Crisis Management Strategies*

In the introduction chapter we posed the following three questions about Iceland's receptiveness to internationalization and about its strategies to manage these pressures:

- *Does Iceland pursue negotiated solutions rather than a confrontational response to crises when it is facing another state or set of states?*
- *Does Iceland ally itself with the other Nordic countries, in line with the tradition of policy coordination, when facing crises with the EU?*
- *Do international concerns trump domestic ones when a value conflict arises in a crisis between international demands and domestic public opinion?*

Since there was only one case in this volume with an international dimension (the fishmeal crisis), we felt it was also fruitful to look at other international conflicts for uncovering Icelandic response patterns: the "Cod Wars" and the whaling ban. In the fishmeal crisis, the Icelandic administration used traditional diplomatic relations to influence the EU decision makers. Emphasis was first and foremost put on supplying information and arguments rather than offering negotiated solutions. The Icelandic administration was prepared to use the WTO rules to support its case if a fishmeal ban would have materialized (Thorhallsson and Ellertsdottir, Chapter 4 in this volume). Even the possibility of taking the EU to the European Court of Justice was discussed in the aftermath of the crisis. Such responses would have demonstrated Iceland's willingness to confront the decisions of the EU member states. Iceland would, however, have had great difficulties in getting the court to consider the fishmeal case since the country is outside the EU (Thorhallsson and Ellertsdottir, Chapter 4 this volume).

In one of the most well-known international crises Iceland has faced was the so-called "Cod Wars." Iceland strongly pursued a confrontational response over fishing limits and territorial water disputes with the British government. Johannesson (2003) argues that the smallness of the country and its reliance on marine products worked against Britain, and that Bismarck's concept of "the tyranny of the weak" was most fitting for this case. He also pointed out that on many occasions Iceland was "more responsible than Britain for the 'absence of diplomacy' i.e. the long periods without sincere efforts to solve the disputes" (Johannesson, 2003). However, the "Cod Wars" might not be suitable for testing the approaches a small state uses in facing a large one during a crisis. Johannesson (2003) has underlined that Iceland benefited from its strategic importance during the Cold War. This importance gave it power and helped Iceland maintain its international stubbornness/firmness. It would be interesting to analyze in more detail if Iceland's decreased strategic importance since the end of the Cold War has changed the country's response to its counterparts during crises.

Regarding the subject of Iceland and its Nordic allies in facing crises with the EU, we cannot assert that the Nordic tradition of coordination policy has been used as a strategy. On the other hand, Iceland's attempt to influence the Nordic states is obvious. Iceland tried to trigger the other Nordic states to react to the fishmeal ban by convincing them that it was also in their own best interests to do so. In Denmark, for instance, many jobs in the fishmeal industry were at stake. The question is if and how Iceland could make the Nordic countries part of its ally if the interests at stake were solely its own?

In the fishmeal case, international concerns did not trump domestic ones. As Thorhalls-son and Ellertsdottir (Chapter 4 in this volume) put it, “When Icelandic policy makers are confronted with a crisis that concerns the fishing industry, they are not faced with value complexity concerning external trade relations.” It is obvious which value is prioritized. Iceland has strict rules concerning agricultural imports and the country has not been affected by the BSE crisis. Thus, the policy makers were confident that fishmeal was safe in animal feed.

The Icelandic history of whaling can also provide us with better insight into how Icelanders react to international demands and pressure, which threaten their own interests. Despite the protest of foreign governments and interest groups, which have often included the threat of sanctions and other actions, Iceland has persistently tried to follow its own policy goals and interests. In 1986, when the International Whaling Commission (IWC) ban on commercial whaling came into effect, Iceland resorted solely to scientific whaling. In 1989, all whaling operations were terminated in Iceland. Then in 2003, the Icelandic government resumed scientific whaling despite disapproval from the IWC. The Government’s argument was that the scientific whaling program was linked to Iceland’s overall policy of sustainable utilization of marine resources and only included non-endangered species (Gunnlaugsson, 2003). Ingebritsen’s study (2001) on Europeanization and cultural identity concluded that for people “such as the Norwegians and Icelanders (along with the Greenlanders and Faeroe Islanders) the resources which have made survival and prosperity possible are jeopardized by compliance with European-wide rules. Nor do these people accept that outsiders should be the ones to oversee how resources are governed” (Ingebritsen, 2001: 74). Ingebritsen’s conclusion could be converted to an explanation on why Icelanders oppose the idea of letting international pressure influence its decision on whaling. Iceland’s reaction to the whaling ban indicates that Icelanders do not generally let international concerns trump domestic ones.

All in all, this suggests that Iceland’s relationship to the international community, in particular its European neighbors, is more confrontational and more assertive than we have seen in other small states (like the European transitional states or Sweden). Slovenia is an interesting example in regard to international pressure. Despite being a transitional state of sorts and being a small state (like Iceland), Brändström and Malesic conclude that Slovenia has been surprisingly resistant to international pressure, and “it seems as if Slovenia has been very careful about remaining independent despite pressure from European/Western countries and organizations” (Brändström and Malesic, 2004: 354). Consequently, it is possible for small states to be more assertive towards the international community than has been widely assumed. Iceland and Slovenia have shown that they can manage crises in a way that safeguard their ability to make their own choices, independent of international influence.

### *Learning from Crises*

Since Iceland has a long administrative tradition and ample crisis and disaster experience, it must also, in our opinion, have well developed procedures for documenting and drawing upon lessons learned. These ‘lessons learned’ may, however, be hard to implement in a small country where state funds are limited and various government organizations compete for these limited resources. Based on this line of argument, we posed the following question on Icelandic crisis learning:

- *Does Iceland have well developed procedures for extracting information, evaluating crisis management, and communicating the findings well, but face problems in the implementation/institutionalization phase due to bureaucratic infighting and institutional resistance?*

In learning from past experiences, more emphasis has been put on the technocratic aspects (such as monitoring systems, warning systems and engineered defensive structures) while less emphasis has been put on preparing responses to these events. For instance, in the aftermath of the 1995 avalanches, the scientific monitoring of avalanche threats has been significantly improved. Furthermore quite a bit of money has been invested in building avalanche-resistant structures located in the probable path of large avalanches in order to minimize the destructive consequences (Bernhardsdottir, 2001). Yet response management (i.e. managing the rescue and relief work), continuous risk evaluations, and recovery efforts have not been given the attention they need.

The Icelandic administration seems to lack the stamina to bring forth changes in crisis practices and legislation. Why is this? In every society a crisis can be seen as a potential “policy window” (Kingdon, 1995), yet because of the smallness of the Icelandic administration (in terms of the number of people and resources devoted to each issue), it is more difficult to seize this opportunity. There is great enthusiasm in setting up committees and a will to solve the problems raised after a crisis, but once people get involved in these committees, competing engagements tend to take over and undermine the evaluation and implementation process.

The avalanche case is a good example of this. Before the avalanches in Sudavik occurred, there were several examples of committees that were either dissolved or produced minor results that were not applicable in the field of avalanche prevention. Even after the first avalanche (which made evident that complex administrative processes needed to be changed), one could see how the authorities focused mainly on resolving the more immediate problems. It was not until the second avalanche that the lessons from the first avalanche were incorporated into the system (Bernhardsdottir, 2001). In Iceland, it appears as if the people on investigating commissions have many competing assignments and simultaneously several other jobs; this significantly delays the committees’ work. The drawn-out committee investigations open up criticism about the need for structural changes. Bureau-political conflicts gain strength and new alliances are formed as the crisis evaluation phase continues to drag on.

There is an interesting parallel here to the Swedish power outage cases in the Stockholm region. A power outage occurred in 2001, and it was seen as a serious incident but rather a freak occurrence; investigations were generated but not many major organizational or structural changes were implemented (Deverell, 2004). When the same power company was faced with another devastating power outage in the exact same area in 2002, incentives were made in addressing the underlying structural and organizational problems. As a result, the top company managers and the local government officials followed through and implemented many of the changes that had been discussed after the first outage but had not been employed (Deverell, 2004).

In the Vikartindur case, an informal team had been working on proposals about redirecting sea traffic away from the spawning grounds, but due to a number of disagreements, nothing ever resulted of the project. After the stranding, a heated debate grew in Iceland about how the case had been managed and there was heavy criticism about the administration’s lack of preparedness and poor response. Since the wreck did not cause large environmental dam-



age, the public discussions in the media primarily concerned the second phase of the crisis (the management effort) rather than the first phase of the crisis, which was more technical in nature (c.f. Stern, 1999). As a result, this criticism nearly triggered a second crisis for the administration. The public, opposition leaders, and the media focused on the organization of the responsible authorities, the decision-making process, and the operational procedures of the recovery and cleanup work. It was even suggested that some of the main problems had been caused by an unclear division of labor between the involved agencies, uncertainty concerning administrative procedures, and an unclear legal framework concerning when a ship at sea is in danger and/or runs aground. Unclear legal frameworks create a diffusion of responsibilities.

The Vikartindur case served as a test for the new Ministry for the Environment, which had only been established seven years prior when the functions and responsibilities of six other ministries had been consolidated. The stranding showed that a number of issues were unsatisfactory with regard to the Icelandic capability to prevent or respond to a pollution episode. It clearly revealed that the legislation needed to be reviewed. Laws and regulations need to be more straightforward, authorities need to investigate the response, and more clear-cut communication channels are needed between the parties involved in environmental incidents.

In 1997 the Minister of Justice appointed a committee to revise the Act on Strandings and Jetsam (No. 42/1926). In the revision it was suggested that a three-member "Coastal Committee" should be appointed and charged with the supreme command of coastal affairs, but this was criticized. The critics argued that the committee would only further complicate a stranding incident, and not improve it. The committee would just be an additional unit to the existing system, and it would most likely serve to increase the legal uncertainty instead of reducing it. A counter suggestion was that the current institutions legally responsible for handling stranding issues should be required to make a joint agreement on an appropriate procedure. In addition, other parts of the revised stranding bill duplicated or even contradicted the existing laws, and subsequently it was "put on ice" for future review (Bernhardsdottir and Gudmundsdottir, Chapter 5 of this volume). This exemplifies a lesson that was not 'learned' or implemented after the Vikartindur stranding. If a similar stranding situation would arise again, the same legal uncertainty would likely hinder an effective administrative response.

### *Concluding Discussion: Iceland and Its Crisis Culture*

After having examined and compared the empirical findings from a number of Icelandic crisis case studies, several of our conclusions seemed to poorly match the research findings and assumptions of other scholars about small states. This warrants further discussion. In an effort to provide alternative explanations and theoretical links to these anomalous findings, we introduce a crisis culture perspective in the following sections. We compare the Icelandic experiences mapped out in this volume with a number of Swedish crisis cases (Sundelius, Stern, and Bynander, 1997). We also explore, to what extent, culture as opposed to being a small state can explain the crisis management styles of these two states. In our concluding remarks, we formulate a number of propositions about crisis management in Iceland and small states more generally that we feel will serve as a fruitful platform for further research.



## CIVIL DEFENSE EGALITARIANISM

Bernhardsdottir and Kristinsson (2003) argue that the strongest cultural predisposition to Icelandic crisis management is egalitarianism.<sup>2</sup> According to cultural theory,<sup>3</sup> egalitarians are absorbed to a great extent by group membership but are not restrained by pre-made prescriptions on how to behave. Looking at the civil defense structure in Iceland, one can clearly see how decentralized organizational control in the country is. Operative decisions are decentralized to the level where actions must be taken. In addition, the involvement of different parties is based upon the nature of the crisis, and volunteer organizations play an important role in this. Such responses demand consensus between the parties in crisis decision making.

In preparedness and prevention, the egalitarian culture puts emphasis on participation, which is supported by the Government and where the initiative comes directly from the public. Preparedness relies heavily on volunteer organizations, and the Government adapts laws that support this preparedness structure. This is how it has traditionally been and people want it this way because they have invested heavily in these arrangements.

Decision making during a crisis is decentralized with an unclear division of responsibility and tasks, which are also typical characteristics of egalitarianism. It emphasizes the autonomy of local governments, individual responsibility, and voluntary associations. The requirement for consensus decision making in egalitarian groups can paralyze responses when disagreements arise within the group (Thompson, Ellis and Wildavsky, 1990). Consensus crisis decision making can be time consuming and consequently costly. In the Icelandic case studies, individual initiative was salient when individuals felt there was no time for dilatory group processes.

Information processing is pragmatic and not very formalized. The drawback of this approach is that it is unclear to the people who should know it. One of its advantages is flexibility. It allows people to be creative in their management of problems. This is facilitated by a small country's close-knit community networks (with little anonymity) where everyone is needed and expected to help out. This egalitarian culture emphasizes the group or individuals who speak for the group. Equality is more important than freedom. According to Olafsson (1985), the emphasis on equality relative to freedom is far greater in Iceland than elsewhere in North America and Europe, even than in the other Nordic countries.

In the learning process, participation trumps the systematic evaluation of experiences. There is also a strong emphasis on decentralization in the learning process; that is, the rescue services or the Red Cross should be allowed to draw their own conclusions and learn in their own way. The egalitarian culture is very opposed to the idea of a few people telling the larger public how to do something. There is a strong belief that no individual is better than anyone else at doing something. Rather, all people are expected to contribute and pull their share, regardless of what their tasks end up being. There is a high community awareness of the civil

---

<sup>2</sup> Their study is built upon data obtained from two sources: a) A Nordic survey conducted in 1999 measuring four main cultural orientations: hierarchy, egalitarianism, individualism and fatalism. b) The Icelandic cases in Crismart's case bank.

<sup>3</sup> Cultural theory is inspired by the work of the anthropologist Mary Douglas. According to this theory the apparently unique combinations of cultural bias and social relations in different social settings are most fruitfully analyzed using simple grid group typology of sociality. Grid refers to the extent to which an individual is restrained by prescription; group denotes the extent to which s/he is absorbed by group membership. Dichotomizing both grid and group, one is provided with a fourfold typology of cultural orientations: hierarchy, individualism, egalitarianism and fatalism.

defense tasks at hand that has been stimulated by the high levels of voluntary involvement (Bernhardsdottir and Kristinsson, 2003).

### THE ICELANDIC MINISTRY OF FOREIGN AFFAIRS AND INTERNATIONALISM

By nature, the Icelandic Ministry of Foreign Affairs has one foot in the country and the other one in the international arena. The Ministry has increasingly and rapidly utilized learning since the introduction of the EEA Agreement. It has been very good at seeing how Iceland fits into the international arena and context. The Ministry has been flexible and has adapted Icelandic policy to international demands and conditions. By doing this, and being proactive, the Ministry has in a sense moved beyond the traditional Icelandic policy culture.

This was illustrated in the fishmeal crisis case. It differs in many aspects from the other cases. The Foreign Service had considerable advantages for coping with such a crisis. Information is processed through formal and informal (diplomatic) channels on a regular basis in the Ministry of Foreign Affairs, specifically by the Foreign Service officers in their daily assignments. Even though these channels are rehearsed daily, the fishmeal crisis still demanded quite a bit of improvisation, which the Foreign Service was successfully able to pull off.

Furthermore, the fact that the Icelandic Ambassadors in the individual EU member states were granted autonomy in deciding whom to contact in the respective member state was significant for the positive outcome in the fishmeal crisis. Thorhallsson and Ellertsdottir (Chapter 4 of this volume) concluded that flexible decision making is a typical characteristic of Iceland, as a small state, and it was extremely advantageous in dealing with the fishmeal crisis.

During the crisis, the Ministry of Foreign Affairs remained in charge of the decision-making process, but conducted the decision making through the 'coordination model'<sup>4</sup> (Rosenthal and Kouzmin, 1993), which is common in a traditional egalitarian civil defense culture. Even though the Ministry adhered to the Icelandic decision-making norms (which are decentralized in nature), it still employed a greater amount of centralized control than is commonly seen in Icelandic crisis management.

The public felt that the Ministry of Foreign Affairs dealt efficiently with the fishmeal crisis and it was respected for how it tackled the situation. The administration's capacity for dealing with European affairs significantly increased after joining the EEA Agreement and after a substantive number of experts on European integration were employed.

### ICELAND IN A COMPARATIVE PERSPECTIVE

According to the Nordic survey (Grendstad et al., 1999), the Swedish culture is a complicated combination of fatalism and hierarchy, which tells us among other things that Swedes are more restrained by prescription than Icelanders. The findings of the Swedish crisis management cases (Sundelius, Stern and Bynander, 1997) support the cultural theory (Bernhards-

<sup>4</sup> The concept behind this model is that administrative units are present when it comes to solving a problems but do not otherwise interfere. The main goal is to keep the decision making decentralized and avoid conflicts associated with centralizing the coordination function to a top decision-making level.

dottir and Kristinsson, 2003). Swedes emphasize the use of expertise in preplanning, clear working procedures, and centralized decision-making groups consisting of politicians and government officials during crises. The Swedish emphasis on coherence is clear in a crisis response where the main role of the Government is to avoid conflicts within and between the various agencies. Supporting political leaders is considered more important than using the crisis to support the interests or wishes of other individuals or institutions. This mirrors the hierarchical approach.

Then the question is how Swedes can put such faith in the experts' abilities to prepare for crises when at the same time they have a fatalistic view of crises, which alleges that you cannot predict crises or their consequences. According to Hood (1998), the difference between the fatalistic and the hierarchical perspectives influences the extent to which we can systematically draw historical lessons. Those who follow the hierarchical perspective choose to investigate what lies behind the poor decisions made by the specialists: thus, providing lessons for future planning. Those who support the fatalistic perspective maintain that analyzing events after unexpected crises just reinforces the fact that unpredicted failures or successes are a part of human nature and are almost impossible to avoid.

According to Swedish crisis research, Swedes seem to follow the hierarchical perspective. The combination of fatalism and hierarchy found in Sweden is termed "lowerarchy" by Grenstad (2001). It may indicate a belief in hierarchy mixed with the fatalistic belief 'from cradle to grave' embodied in the Swedish welfare state. Individuals who do not prepare themselves for problems are more likely to become victims of circumstances (which belongs to the fatalism perspective). Such passiveness can be seen among Swedes. This does not mean that they believe humans are unable to avoid crises, but they trust the authorities' ability to deal with such matters. Like Ruin (1982) points out, Swedes have not encouraged volunteer groups. He argues that the Government has taken on too much responsibility for the citizen's welfare, which discourages the initiative of individuals and volunteer groups. For instance, the Local Free Government project was launched in the 1980s and was an attempt to improve the ability of the Swedish administration to actively engage the public in policy making. This sharply contrasted with the hierarchical tradition of the Swedish administration. The attempt failed, and instead of giving the public a more decisive role in public policy making, it actually increased the politicians' and officers' responsibilities (Stewart and Stoker, 1989; Bernhardsdottir and Kristinsson, 2003).

To sum up, there are cultural differences between Iceland and Sweden. The Icelandic crisis culture emphasizes public participation and the Swedish culture has a much stronger reliance on experts. Decision making is highly decentralized in Iceland with unclear divisions of responsibility between the local actors; while Sweden is more likely to utilize a centralized decision-making group during a crisis. In terms of learning, Sweden has a stronger emphasis on systematic evaluation (mainly by specialists); while in Iceland such evaluations give way to participation and the right to learn from your own mistakes without having lessons being dictated to you.

#### CONCLUDING REMARKS AND PROPOSITIONS

One of the implications of our findings on Icelandic crisis management is that we can only partly transfer crisis management findings and lessons from one country to another, even

when the countries share a number of similar historical, political and administrative features. Citizens and government officials facing crises share a common concern: the need to prepare for and respond to crises as they occur. However, the ways that citizens and institutions from various countries go about meeting this concern can differ considerably.

The characteristics of being a ‘small state’ (such as limited domestic resources, dependency on international markets, and limited administrative capacity) have gained support in this volume as one of the explanatory factors of Icelandic crisis management. The case study findings also indicate that there are other factors that need to be considered in order to get a more accurate picture of what influences a state’s crisis management capacity and particular style. Having drawn these conclusions, the importance of knowing and understanding the societal context in which a crisis occurs is crucial in ensuring vigilant crisis preparedness and response. We need to continue asking questions about what the prevalent organizational structures are and what the customs and standard operating procedures in responding to crises in a specific country are, as well as what resources are available. And last but not least, we need to ask new questions about what the prevalent perspectives on crises, or crisis culture, in that particular country are.

Realizing that considerable time has passed between the first case study and the last one in this volume, we recognize that Icelandic crisis management has evolved and some lessons have been learned during these eight years. We also recognize that the issues we have discussed in this concluding chapter are by no means exhaustive; they offer a number of perspectives and insights for decision makers as they strive to continuously improve and adapt to the challenges they face. With these observations and assertions in mind, we end this chapter with the following propositions for future research on crisis management in Iceland in particular, and small states more generally.

### *Administrative and Organizational Influences on National Crisis Management*

1. A strong reliance on volunteer networks for dealing with disasters hampers states’ ability to engage in effective strategic planning (preparedness, detection, response and adaptation). It gears preparedness only towards contingencies that are significant for the general public. Under these circumstances, small states are less likely to prepare for high-impact disasters (like earthquakes and avalanches) and crises requiring international interaction because the former invokes denial and the latter is more removed from the general public’s domain.
2. Professionalization and a shift toward a more hierarchical and centralized style of managing crises lead to more effective responses as long as the problems are clearly identified.
3. Comprehensive information gathering and coordination are rendered more difficult and time-consuming by a decentralized crisis response structure, particularly if no one is formally tasked with coordinating incoming information.
4. In Iceland, the system’s most vulnerable points are the management of disagreements *between* (rather than within) decision-making groups and a lack of incentive (in terms of up-scaling) and clarity (legally and organizationally) regarding when and how to centralize issues.

5. The more time-consuming the evaluation process is, the less likely the implementation of organizational learning endeavors become, as the evaluation process tends to exceed the time span that a group consensus can be maintained.

### *The Impact of Culture on Crisis Management*

6. In countries with a strong democratic tradition and a predominant egalitarian culture, decentralization and inclusiveness are favored over efficiency.
7. State 'corporatism' facilitates effective crisis management within and in small states (partnerships with private companies, organizations and individuals), but is of no help and renders the small state particularly vulnerable when the key crisis actor is a private actor from outside the corporatist setting (e.g., another country or an international actor).
8. A reactive and pragmatic approach to threats combined with short information channels has the virtue of enabling flexibility and creativity on behalf of decision makers in ad hoc responses to crises.
9. An egalitarian culture, with an emphasis on participation and self-evaluation, can be a hindrance to organizational learning as the great number of learning endeavors that arise from this emphasis and its laborious processing can overtax the scarce organizational resources. As a consequence, the stronger the egalitarian culture, the more likely organizations are to (paradoxically) initiate learning endeavors after crises and be less likely to complete the investigative process and implement any lessons identified.

### *Crisis Management in Small (Democratic and Economically Prosperous) States*

10. Limited resources and 'layman characteristics' (great public participation and little professional staff to organize and manage crises) prominent in small states' crisis management systems make them much more prone to be reactive than proactive in identifying and managing crises.
11. In small states, individual initiatives (further enabled by an egalitarian culture and the mental and physical 'closeness' to decision makers) are commonly recognized and accepted as slack capacity of the state's crisis management system, and they work as a default mechanism when the formal process is too slow.
12. Even small states can be resistant to international pressure and aggressively pursue their positions in crises if the issue is perceived as one of the country's core values and/or traditional ways of life.
13. Cooperation problems and bureaucratic infighting in small states tend to be the result of a lack of planning and unclear rules in crisis situations rather than the actors' concern over future distribution of the state's scarce resources.



## References

- Bernhardsdottir, A. E. (2001) *Learning from Past Experiences: The 1995 Avalanches in Iceland*. Stockholm: The National Defense College of Sweden.
- Bernhardsdottir A. E. and G. H. Kristinsson (2003) *Kúltúrkenning um áfallastjornun* [Crisis Management and Cultural Theory] *Rannsóknir í félagsvísindum IV* [Research in Social Sciences IV]. Reykjavik: The University Press.
- Bernhardsdottir, A. E. and S. Thorvaldsdottir (2002) *Sudurlandsskjálftar 2000* [Earthquakes in the Southland 2000]. Reykjavik: The National Civil Defence (AVRIK).
- Brändström, A. and M. Malesic (2004) "A Comparative Analysis and Conclusions." In *Crisis Management in Slovenia: Comparative Perspectives*, edited by Annika Brändström and Marjan Malesic, p. 347–369. Stockholm: Swedish National Defence College.
- Deverell, E. (2004) *Elavbrottet i Kista den 29–31 maj 2002* [The Power Outage in Kista May 29–31, 2002: Organizational and Interorganizational Learning in Crisis]. Stockholm: Swedish National Defence College.
- Grenstad, G. (2001). "Nordic Cultural Baselines: Accounting for Domestic Convergence and Foreign Policy Divergence." *Journal of Comparative Policy Analysis*. 3: 5–29.
- Grenstad, G.; L. Jensen; G. H. Kristinsson; L. Söberg; and S. Sundback (1999) *Nordic Cultures: Measurement, Consequences and Comparisons*. Bergen: LOS-sentret.
- Gudrodarson, Fridjon (2001) Chief of Police in Rangarvalla county. Personal interview conducted by Gudrun Arnadottir (Chapter 3 of this volume).
- Gunnlaugsson, S.H. (2003) Letter written by the Ambassador of the Icelandic Embassy in Reykjavik on behalf of the Icelandic Government – addressed to the person who wrote a protest letter regarding Iceland's decision to resume whaling.
- t' Hart, P.; U. Rosenthal; and A. Kouzmin (1993) *Crisis Decision Making – The Centralization Thesis Revisited*. *Administration and Society*. 25(1): 12–45.
- Hood, C. (1998). *The Art of the State: Culture, Rhetoric, and Public Management*. Oxford: Clarendon Press.
- Hood, C.; H. Rothstein; and R. Baldwin (2001). *The Government of Risk*. Oxford: Oxford University Press.
- Icelandic Parliament (1926) No. 42/1926, Act on Strandings and Jetsam.
- Icelandic Parliament (1992) No 55/1992: Article 2, Act on the National Disaster Insurance Fund
- Ingebritsen, C. (2001) "Europeanization and Cultural Identity – Two Worlds of Eco-capitalism." *Scandinavian Studies*. 73:1.
- International Convention (1989) *An international convention on intervention in cases of oil pollution casualties at the high seas*.
- Johannesson, G. T. (unpublished) *Troubled Waters. Cod War, Fishing Disputes, and Britain's Fights for the Freedom of the High Seas, 1948–1964*. PhD thesis, University of London, 2003.
- Katzenstein, P. (1985) *Small States in World Markets: Industrial Policy in Europe*. Ithaca, NY: Cornell University Press.
- Kingdon, J. (1995) *Agendas, Alternatives, and Public Policy*. 2nd ed. New York: Harper Collins.

- Minaeva, L. and D. Nohrstedt (2002) "The Kursk Submarine Accident: Coping with Value Complexity and a Credibility Crisis." In *Crisis Management in Russia: Overcoming Institutional Rigidity and Resource Constraints*, edited by Boris Porfiriev and Lina Svedin, p. 223–260. Stockholm: Swedish National Defence College.
- Newlove, L.; E. Stern; and L. Svedin, (2000) *Auckland Unplugged*. Stockholm: National Defence College of Sweden.
- Olafsson, S. (1985) *Hvernig eru Íslendingar? Nokkrar vísbendingar um gildi í menningu Íslendinga*. [How to describe Icelanders? A few indications about values in Icelandic culture] Reykjavik: Department of Social Sciences, University of Iceland.
- Raphael, Beverley (1986) *When Disaster Strikes – A Handbook for the Caring Professions*. London: Unwin Hyman Ltd.
- Rosenthal, U. and A. Kouzmin (1993) "Globalizing an Agenda for Contingencies and Crisis Management. An Editorial Statement." *Journal of Contingencies and Crisis Management*.
- Ruin, O. (1982). "Sweden in the 1970s: Policy-Making Becomes More Difficult." In *Policy Styles in Western Europe*, edited by J. Richardson. London: George Allen and Unwin.
- Stern, E. (1999) *Crisis Decision Making: A Cognitive-Institutional Approach*. Stockholm Studies in Politics 66: Stockholm University.
- Stewart, J. and G. Stoker (1989) *The 'Free Local Government' Experiments and the Program of Public Service Reform in Scandinavia: The New Centralism*. Cambridge: The Political Quarterly Publishing Co.
- Sundelius, B.; E. Stern; and F. Bynander (1997) *Krishantering på svenska: teori och praktik [Crisis Management the Swedish Way: Theory and Practice]*. Stockholm: Nerenius and Santerus Forlag.
- Svedin, L. (1998) "Mc-krig i Sverige och Skandinavien 1994–97" [Biker Wars in Sweden and the Nordic Countries 1994–97] In *Crisis and Internationalization: Eight Case Studies from a Cognitive-Institutional Perspective*, edited by E. Stern and F. Bynander, p. 128–143. Stockholm: Swedish Agency for Civil Emergency Preparedness.
- Svedin, L. (1999) *Crisis Mitigation and Community Resilience: The Red River Flood of '97*. Stockholm: Swedish Institute of International Affairs.
- Thompson, M.; R. Ellis; and A. Wildavsky (1990) *Cultural Theory as Political Science*. London: Routledge.
- Thorarinsdóttir, Thora (2001) "Sudurlandsskjálfrar 2000: Ahrif og afleiðingar." Earthquakes in Southland 2000. Effects and Consequences. *Godasteinn* 1:37, pp. 218–263.
- Whale and Dolphin Conservation Society (2004) *Iceland's History of Whaling*  
<http://www.wdcs.org/dan/publishing.nsf/allweb/70DE313A7BC7E5C280256DDD0054AF86> (12 January 2004).
- Whitehead, T. (1999) *Bretarnir koma [The British Arrive]*. Reykjavik: Vaka Helgafell.

## About the Authors

**Gudrun Arnadottir** is currently working as a psychologist trainee at the Psychiatric Department at the National University Hospital in Reykjavik. Gudrun has a BA and MA in Psychology, and has done a postgraduate study in Cognitive-Behavioral Therapy.

**Asthildur Elva Bernhardsdottir** is the Director of the Institute for International Relations and the Center for Small State Studies at the University of Iceland. She has previously published *Learning from Past Experiences: The 1995 Avalanches in Iceland* (Volume 16) through CRISMART and she has served as the group coordinator for the Icelandic research team of this volume.

**Elva Ellertsdottir** is a Project Manager at the Department of Social Science at the University of Iceland. Elva has a Master's degree in Public Administration.

**Gudny Bjork Eydal** is an Assistant Professor in Social Work at the University of Iceland. Gudny has a Bachelor of Arts in Sociology and a Certificate of Qualification in Social Work, MSW. Currently Gudny is working on a PhD in Sociology at the University of Gothenburg in Sweden. She has published several articles, mainly in the field of social and family policy.

**Soffia Gudmundsdottir** is the Executive Secretary of PAME under the Arctic Council Working Group. Soffia has a Bachelor of Science in Chemistry and in Environmental Engineering, and a Masters in Business Administration.

**Dr. Gunnar Helgi Kristinsson** is a Professor of Government at the University of Iceland. He has written extensively on various aspects of Icelandic politics and public administration. His recent works include books on the budgetary process and local government in Iceland.

**Lina M. Svedin** is a PhD Candidate in Political Science at the Maxwell School of Citizenship and Public Affairs at Syracuse University. She has published several case studies in the CRISMART series, including co-editing the volume on Russian crisis management (Volume 17). Furthermore, she is a co-author of *Auckland Unplugged: Coping with Critical Infrastructure Failure* (Lexington).

**Dr. Baldur Thorhallsson** is an Associate Professor of Political Science at the University of Iceland. He has published a number of articles on Iceland and the European Union, and on small states and European integration. His book, *The Role of Small States in the European Union*, was published in 2000 by Ashgate. His forthcoming book on Iceland and European integration will be published by Routledge in 2004.