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Disaster social work in Iceland
Cruise ship accident: A case scenario

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Abstract

Tourism has become one of the largest industries in Iceland and the number of visitors has reached almost two million a year. Accidents involving tourists have become more frequent and this puts a certain strain on the country’s infrastructure and civil protection system. Cruise ship traffic around Iceland has increased rapidly and presents hazards which could turn into a disaster should there come to a cruise ship accident. Social workers are a profession which often works closely with people who suffer due to societal changes and disaster social work is a term which describes the work carried out by social workers in the context of disasters. This thesis describes a case scenario where a cruise ship accident takes place north of Iceland. The scenario is set up to answer the questions of what would be the role of local social services and social workers in case of a cruise ship accident in Iceland, and how can social workers contribute in the field of disaster management and are their skills being fully utilized in the context of disasters? Main concepts in connection with disaster social work, disaster social work education and disaster management and the civil protection system in Iceland are introduced, as well as the present status of social workers and social services within the field of disaster management in Iceland. Conclusions show that social workers can carry out many important tasks in the context of disasters and their skills and competencies could prove valuable in the case of a disaster. It seems that the skills and competencies of social workers are not being fully utilized and deserve more attention from disaster management and civil protection authorities.
Útdráttur


Key concepts: Disasters, social work, cruise ship, tourism hamfarafélagsráðgjöf, skemmtiferðaskip, slys, ferðamenn,
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This paper is a 12 ECTS project in 180 ECTS Bachelor of social work studies at the University of Iceland. It was in a course on crisis, grief and psychological first aid where the concept of disaster social work was brought to my attention and has lead me to the rapidly expanding world of disaster and crisis management. Entering an exchange program on disaster social work in Denmark further enhanced my knowledge and interest. Icelandic society has undergone changes in relations to an increasing number of tourists visiting the country and combining those societal changes and disaster social work seemed like an exciting task. I would like to thank my instructor Guðný Björk Eydal for her ideas, constructive guidance and patience during the writing process. I also want to thank Lis Klovning Hansen Montes De Oca for cheering me on, Sandra Bender for assisting with infographs and of course I want to thank my husband and children for their patience and support.
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1 Introduction

Iceland is in many ways an amazing place. It is a tiny island, situated on the 66th parallel north, right on the meeting place between the North American and the Eurasian tectonic plates (Mustain, 2012). This makes the island vulnerable to natural hazards like earthquakes and volcanic eruptions, but also provides valuable resources like hot water and a relatively mild climate. Iceland is also the world’s most peaceful country and for instance boasts of many star musicians and outstanding soccer players. It has the largest glacier and the most powerful waterfall in Europe and is known for breathtaking landscapes and unspoiled nature. The country’s reputation and beauty have created an until recently untapped resource. After the financial crisis in 2008 and the Eyjafjallajökull eruption in 2010, tourism has expanded far beyond what anyone could have predicted and business is booming. Disasters are not driving people away, but have become an attraction for adventure seeking travellers. In ten years, the number of visitors has grown from about half a million to almost two million people a year (Icelandic Tourist Board, 2016).

Even though most of the visitors leave the country with good memories and incredible selfies, receiving almost two million guests a year does not come without complications for both locals and guests. The number of people who are injured or killed while travelling in Iceland has been rising and the already strained health care system, search and rescue teams and coast guard are barely keeping up with the growing number of incidents they need to respond to (Jóhann K. Jóhannsson, 2017). The biggest tourism related accident was a bus accident involving more than fifty people. It cost one life, more were critically injured and about 300 people were involved in rescue operations and services concerning the tragic accident (Kristín Sigurðardóttir, 2017).

Search and rescue teams, hospitals and the police have the most obvious roles should it come to a disaster. What often goes unnoticed is that the social services and social workers play an important part in the context of disasters. In a report issued by the Nordic Welfare Watch in 2016, it is clearly stated that there is great need to include the social services more in disaster management and contingency planning (Guðný Björk Eydal, Ingibjörg Lilja Ómarsdóttir, Carin Björngren Cuadra, Rasmus Dahlberg, Björn Hvinden, Merja Rapeli and Tapio Salonen, 2016).
The author of this paper has always been interested in disasters, and when taking the course *Crisis, grief and psychological first-aid* at the University of Iceland, the interest in disaster social work was ignited. For some hands on experience, joining the Icelandic Red Cross emergency and disaster unit (*viðbragðshópur*) has given valuable insights and experience. To further enhance knowledge of the subject, joining an exchange program on social work in the context of disasters and conflict at Via University College in Århus, Denmark, was the next step. This led to an increased interest and focus on disaster social work and management. When choosing a topic for the paper, combining societal changes and their effect on public safety was an idea which kept coming up and increased cruise ship traffic in Arctic waters is an interesting subject.

Even though most people would connect bigger accidents or disasters in Iceland with volcanic eruptions or earthquakes, the case in this paper is inspired by a relatively silent part of the tourism explosion. More than 100 cruise ships visited Reykjavík harbour in 2016 (Icelandic tourist board, n.d.) and the scenario described will be of a cruise ship sinking close to the West Fjords of Iceland on its way around the island. The case will be adjusted to legal and environmental conditions in Iceland and Icelandic contingency plans. To make the example more realistic it is partially based on actual events.

Reports and research on the tragic MV Estonia accident in 1994 and the Maxim Gorky accident in 1989 proved helpful when constructing the case and some aspects of these events could well apply to a maritime disaster around Iceland.

The goal of this paper is to answer the following research questions:

- In case of a cruise ship accident in Iceland, what would be the role of local social services and social workers?
- How can social workers contribute in the field of disaster management and are their skills being fully utilized in context of disasters?

To answer these questions it is important to know about main concepts such as disasters and disaster social work which are introduced in chapter two. The importance of educating and training social workers in context of disasters will also be discussed in the chapter, followed by a description of the disaster management cycle.
To understand the number of roles and tasks that social services and social workers have at each phase of the disaster management cycle, a case study of a cruise ship disaster is used for demonstration. In disaster research it is highly common to demonstrate with a invented example or a scenario, like one of the major scholars in the field, Michael J. Zakour (1996), did in his article: Geographic and social distance during emergencies: A path model of interorganizational links where he studies volunteer organizations in a set up scenario of an earthquake (Zakour, 1996).

Almannaðnir is the Icelandic word for the Civil Protection and Emergency Management institution, and will be referred to as Civil Protection. The Civil Protection and Emergency Management institution has supervision of the emergency management system in Iceland. The role of the Icelandic Civil Protection and the emergency management structure is focused on in chapter three. The available contingency plans and each responding unit or institution is introduced, and the cooperation between those institutions and units described in context of the already existing contingency plans. It is further explained how each unit might contribute or act in case of a maritime accident.

Since the subject has to do with the significant growth in tourism in Iceland, a short introduction is made in chapter four on the tourism related challenges facing the local disaster management system. Should it come to a major incident such as a cruise ship accident it is discussed how the available resources could be utilized for the best result. Numbers from the Icelandic Tourist Board which show the rapid increase in tourism are introduced in the chapter, followed by a discussion on why it is important to include this relatively new factor in contingency plans.

The case of the MV Estonia car ferry which sank in the Baltic in 1995, and the Maxim Gorky cruise ship, which stranded on ice near Svalbard in 1989 are presented in chapter five. It is explained how these cases could be relevant to the case scenario described later in the paper and useful to realize the presumed course of events. Relevant scientific research, conducted by the Norwegian Coast Guard and the University of Stavanger is shortly described for the purposes of estimating life expectancies of those involved in a cruise ship accident.

The case scenario is described in chapter six. This is done by explaining location, number and demographics of passengers and general natural and other local conditions. The
scenario takes place north of Iceland and it is important to demonstrate how Icelandic conditions, such as distances and sparse population might effect the rescue operations.

Chapter seven focuses on the social work aspect of the disaster management cycle. It explains how social workers can attend to various responsibilities both during and after the accident and examples on possible tasks are listed. The examples are based on existing experience of disaster management in Iceland and how social workers have contributed to disaster ridden societies in the past.
2 Disaster social work

In this chapter, main concepts concerning disaster social work are defined and how they connect, creating the term disaster social work. It is also explained which functions social workers can have in disaster management and how the humanitarian foundation of social work is not only relevant but important in disaster management.

Modern social work is inspired by the work of pioneers like Mary Richmond and Jane Addams, who worked with people in need in the early 20th century (Franklin, 1989). They provided people with food and shelter and more importantly worked alongside them and were involved in their daily life, empowering people and giving them a chance of a better life (Franklin, 1986). The profession has evolved through the years and social workers are now working with people who have for some reason encountered difficulties in their lives. Being exposed to disasters poses numerous social challenges for individuals and societies world wide and social workers help face those challenges in many different ways.

Since disaster social work is a relatively new term it is important to define it in this context. Robin L. Ersing (2010) states in her article on building disaster resilient communities, that the response to hurricane Katrina in 2005 was perhaps the point where the term of disaster social work became known. Gillespie and Danso (2010) also point out that undoubtedly there will be countless more disasters and hazards such as earthquakes, storms and floods in the world. There seems to be an increase in such occurrences and the number of casualties are rising (Gillespie and Danso, 2010). Not all societies are equally prepared to deal with such hazards, and social workers are perhaps the best equipped profession to diminish the societal damage caused by these hazards (Ersing, 2010; Gillespie and Danso, 2010).

The International Federation of Social Work (IFSW) defines the concept of social work as such:

Social work is a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. [...] Underpinned by theories of social work, social sciences, humanities and indigenous knowledge, social work engages people and structures to address life challenges and enhance wellbeing (IFSW, 2014).
To connect the concepts of disaster and social work, it is also important to familiarize with the official definition of a disaster. The United Nations office for Disaster Risk Reduction [UNISDR] defines disaster as:

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources (UNISDR, 2017).

In his article on social work and community vulnerability and resilience, Michael J. Zakour (2013) explains the difference between hazards and disasters. Hazards are imminent dangers, either natural or man-made, which don’t always turn into disasters. Natural hazards are for example storms or volcanic eruptions and man made hazards could be poorly built houses or pollution (Zakour, 2013). It is only when these hazards are combined with certain societal conditions that they can cause a disaster, making it important to empower people, strengthening societies and prepare them for facing hazards, trying to avoid disasters (Zakour, 2013).

Daniel P. Aldrich (2012) gives an example of how the same natural hazard can cause very different levels of disruption in the daily life of societies. He writes about hurricane Katrina, and how some neighborhoods of New Orleans were quickly rebuilt when no attempt had been made to rebuild other parts of the city, even years after the event (Aldrich, 2012, p.130). The pace of the rebuilding process depended on the socioeconomic status of those living in the city, creating a situation where the poor, less educated and the elderly didn’t have the means to put their life back on track after they had lost their homes to floods brought on by the hurricane (Aldrich, 2012, p.131).

Lena Dominelli (2015) wrote about how social workers can have the important role of being an advocate for the the more vulnerable groups, providing access to information and resources those groups would otherwise not have. She says that social workers are often in the unique position to be linked to both the weakest and poor individuals of a society and the institutions holding the power to assist and provide financial and social aid (Dominelli, 2015).

Professor Golan M. Mathbor (2007) also recognizes this in his article on community preparedness, where he says that not only are social workers in a position to link vulnerable groups in a society to necessary resources, but they can also make people realize their own
strengths and talent which might help them recover after disasters (Mathbor, 2007). Social workers using their capabilities to empower individuals otherwise isolated due to poverty or other reasons, could ultimately strengthen a society, reducing the risk of hazards becoming a disaster (Dominelli, 2015; Mathbor, 2007).

Michael J. Zakour talks about vulnerability and risk assessment and explains that the most vulnerable groups in the context of disaster are those of color, un-educated, women and children, the elderly and the ill (Zakour, 2010, p.16). Guat Tin Ng (2012) researched the multiple roles of social workers in the context of disaster, and at the top of the list is to attend to special needs of the more vulnerable groups and to help people deal with their loss and grief (Ng, 2012).

Lesley Cooper and Lynne Briggs (2014) from the university of Wollongong, Australia, talk about the lack of training in disaster related issues in social work education. They state that social workers have the capacity to work alone or with others and possess valuable skills which can be an important contribution when working in context of disasters (Cooper and Briggs, 2014). They describe how social workers offered their homes and personal resources such as telephones to assist people in need after an earthquake in New Zealand (Cooper and Briggs, 2014).

Gillespie and Danso (2010) claim that the five most important resources after a disaster are information, people, money, physical space and equipment. They also put an emphasis on cooperation between organizations and the importance of the social workers knowledge on the whole disaster cycle (Gillespie and Danso, 2010, p.113).

There are many examples of how social workers facilitate resources and how their skills and training are useful within the field of disasters. The various tasks conducted by social workers in times of disasters will be introduced in the next chapter and also in context of the case scenario described later in this paper.

2.1 Disaster social work education
Concluding from the last chapter, social workes have important knowledge and insights which could prove crucial both in the preparing and rebuilding process when it comes to
disasters. This leads to the question of whether social workers receive adequate training and education on disaster management during their studies.

In the International Association of Schools of Social Work [IASSW] mission statement it says that one of the associations goals is to “promote excellence in social work education to enhance human wellbeing” (IASSWF, n.d.). In 2010, the IASSWF further issued a statement on disaster intervention where it was explained that social workers do indeed have multiple roles and tasks in disaster response and the rebuilding of societies after disasters. In the statement, social workers are also encouraged to use their abilities to provide aid to those in need (IASSWF, 2010). Amongst the roles social workers can take on during disaster response is being a facilitator, a consultant, mobiliser of resources and what has become more and more important in a world rapidly changing; a cultural translator (IASSWF, 2010).

Cooper and Briggs (2014) conclude that despite the fact that social workers might not have extensive training in disaster work, they do identify their role and tasks in connection with disasters, such as connecting families, providing counselling etc. Yet the training in disaster related subjects is lacking in social work education (Cooper& Briggs, 2014).

This also seems to be the case in Sweden, as Carin Björngren Cuadra (2015) describes in her report written for the Nordic Welfare Watch. She says that social workers in Sweden are mostly seen as a profession which primarily works on an individual level, rather community level (Cuadra, 2015). The social work education therefore lacks in the field of disasters and crisis and results in social workers not being able to use their knowledge and abilities as much as they should be (Cuadra, 2015). Mathbor has pointed out that even though many natural disasters have required substantial assistance of social services and social workers in the United States, the social work curriculum in the country has not changed accordingly (Mathbor, 2007).

In the book *Disaster concepts and issues*, edited by David F. Gillespie and Kofi Danso (2010) valuable knowledge on disaster social work has been gathered in one place. Gillespie illustrates in his article on vulnerability that social workers are the ones who are often in a good position to strengthen vulnerable societies and thus preparing them to deal with crisis more easily (Gillespie, 2010). Even though social work education doesn´t seem to contain much information on how to deal with disasters, the curriculum is based on how to work with people from within every level of society and recognizing cultural differences and
vulnerabilities from a holistic point of view (Gillespie and Danso, 2010). This can prove to be a valuable skill when it comes to dealing with disasters and social work should get more attention when it comes to emergencies and crisis (Cooper and Briggs, 2014; Gillespie and Danso, 2010, p. xi; Gillespie, 2010, p. 3-14).

Asia suffers natural disasters more frequently than many other parts of the world, and as Guat Tin Ng (2012) points out in his article about disaster social work, about 33% of all earthquakes happen in China. After a big earthquake in China in 2008, awareness of the importance of including disaster relief studies in the social work curriculum became a more widely acknowledged fact (Ng, 2012). A social scientist, Dr. Bala Raja Nikku, a board member of the IASSWF, wrote an article in 2015 where he points out that not many people from Asia have had their articles on disaster social work published in English. Because of this, a lot of important information from experienced social work educators and practicing social workers might not reach Europe or North America (Nikku, 2015). These places might benefit from access to information from disaster social workers who frequently deal with disasters on a large scale (Ng, 2012; Nikku, 2015).

There is one mandatory course on disaster work on the social work curriculum at the University of Iceland, but Crisis, grief and psychological first aid is a 4 ECTS course on disaster management and social work in the aftermath of disaster (The University of Iceland, 2016). The course has been taught since 2005 and addresses key concepts within disaster management and introduces the emergency management system of Iceland (The University of Iceland, 2016; Guðný Björk Eydal og Anna Sigrún Ingimarsdóttir, 2013). A part of the course is a Red Cross based training program in psychological first aid and after completing the course, students should have basic knowledge in the causes and effect of trauma and disasters on communities and individuals (The University of Iceland, 2016). They should also have been introduced to the specific roles of social workers during the disaster cycle, the Civil protection system of Iceland and the main concepts of crisis management (University of Iceland, 2016).

VIA University College in Århus, Denmark, offers a 15 ECTS exchange course, Children and Families in the Aftermath of Disasters – Social Work Responses, where social work students are introduced to the main concepts of disaster and disaster management and response (VIA University College, n.d.). The course emphasizes theoretical understanding of
every aspect of disasters and disaster social work, as well as legal framework and international context (Via University College, n.d.).

2.2 Social work and the disaster management cycle
The disaster management cycle, as shown in figure two, is an image which explains the timeline of disasters. In a guide on environmental health in emergencies and disasters, edited by Benjamin Wisner and John Adams (2002), the concept behind the disaster cycle is explained:

Disaster management requires a continuous chain of activities that includes hazard prevention, preparedness, emergency response, relief and recovery, including activities to reconstruct infrastructure and rehabilitate shattered lives and livelihoods (Wisner and Adams, 2002, p.3).

Figure 1 The disaster management cycle

Doreen Elliot (2010) has created a model (Figure 2) which shows how social work can be involved in disaster management and how disaster social work training could be a part of the social work curriculum. In the model, she uses the same concepts as in the disaster management cycle, connecting the tasks of social workers to each phase (Elliot, 2010, p. 96).
Elliots’ model shows how social workers can both work on an individual level, providing basic needs such as water and psychological support, as well as working with governments and local authorities, reviewing policies and promoting changes for socially excluded groups (Elliot, 2010, p. 96).

3 The Civil Protection system of Iceland

The institution Almannavarnadeild Ríkislögreglustjóra or Almannavarnir stands for Department of Civil Protection and Emergency management in Iceland, and will be referred to as Civil Protection (Civil Protection, n.d.)

The Ministry of Justice governs Civil Protection matters in Iceland and the Civil Protection Act purpose statement it says that the goal of Civil Protection is to plan, organize and
execute plans with the aim of protecting the public from any hazards, either natural or man
made (Civil protection Act, 82/2008). The responsibilities of national level Civil Protection are
delegated to the National Commissioner of the Icelandic Police [NCIP], and the Department
of Civil Protection and Emergency Management (Almannavarnir) [DCPEM], run by the NCIP,
is responsible for administrating civil protection matters in Iceland. The Civil Protection
structure shown in figure 3, shows how different parties operate on each level of the
disaster cycle and names the main operating units at each stage (Civil Protection Act
82/2008; Civil Protection,2017-a).

Figure 3 The Civil Protection system in Iceland

There are nine police districts in Iceland, and the local police authorities of each district
control operations in emergencies (Civil Protection, 2017). Iceland also has 21 Civil
Protection districts and each district has a committee which governs the local civil protection
matters with the main responsibilities of carrying out existing contingency plans in case of
emergencies, and initiating the making of new contingency plans according to local needs
and imminent hazards (Civil Protection, 2017).
3.1 Icelandic search and rescue

In case of an emergency where a contingency plan is put into action, several responding parties react and have defined roles according to the plans. The main responding units and their roles will be presented in the following chapters.

The Icelandic Association for Search and Rescue (Landsbjörg) or Ice-Sar, operates close to one hundred search and rescue units around Iceland (Landsbjörg, n.d-a). The units solely consist of volunteers who are ready to react at any time in all of Iceland (Ice-Sar, n.d.-a) The Ice-Sar operations first started in connection with search and rescue at sea, but in a country depending greatly on the fishing industry for survival, accidents at sea have been frequent. The Ice-Sar has many units especially trained in search and rescue operations on sea and is a part of the MRCC coastal search and rescue center (Landsbjörg, n.d. -b).

According to regulation 207/2009, the Ice-Sar delegates the technical operations of every search and rescue unit to the National Management of Search and Rescue units (Landsstjörn Björgunarsveita) during search and rescue operation on coastal areas and the ocean around Iceland (Landsbjörg, n.d.-c; Regulation 207/2009).

Ice-Sar owns about 130 rescue boats of different sizes and thirteen rescue ships which are located around the island (Landbjörg, n.d.-d). The larger boats can reach the speed of up to 30 nautical miles an hours and the ships can reach the same speed and are usually ready to sail within 20 minutes from being called out (Landsbjörg, n.d.-e).

3.2 The Icelandic Red Cross

The Icelandic Red Cross has about 4500 active volunteers in 42 different divisions all around Iceland and provides aid and assistance in various humanitarian projects, both in Iceland and other countries. The (Red Cross, n.d.-a).

The Red Cross Emergency coordination center is located in Reykjavík and manages Red Cross tasks concerning both psychological and physical first-aid, emergency management and surveillance of natural hazards (Red Cross, n.d.-b). A large number of volunteers with special training in the field of emergencies are ready to respond at any given time all around the country (Red Cross, n.d.-b).

A special disaster and emergency unit (viðbragðshópur) is also operated within the Icelandic Red Cross. This group has been especially trained to respond to major crisis and
its members have taken courses in basic disaster management concepts and psychological and physical first aid (Red Cross, n.d.-c). In case of emergencies where a number of people need shelter, for instance due to house fires or storms, this unit is called out and takes care of those who are not injured (Red Cross, n.d.-c).

The Red Cross has defined tasks in contingency plans for natural and man made disasters in the whole country. According to a contingency plan for a cruise ship disaster in Faxaflói bay, the Red Cross should operate a crisis center, organize an area for injured and deceased as well as a meeting point for friends and relatives (Civil Protection, 2016-a, p. 36).

In 2012 an agreement on national aid was made between the Red Cross, Ice-Sar and the NCIP. The agreement confirms the legislative role of Ice-Sar and the Red Cross in official Civil Protection plans and defines the cooperation between municipal civil protection committees, The Red Cross and Ice-Sar in times of disasters or crises (Civil Protection, 2012).

In a major incident like a cruise ship accident where a large number of people are injured or deceased, the Red Cross would open different types of crisis centres for those involved, depending on their needs. A reception centre for relatives who want to reunite with survivors and an information centre to service those in need of assistance or information during the first days after the incident are supervised by the Red Cross, but cooperation with other institutions, like the social services, is not uncommon (The Red Cross, n.d.-d).

3.3 The Icelandic Coast Guard
The Icelandic Coast Guard [ICG] operates under the Ministry of Justice and amongst their obligations is to participate in search and rescue missions on sea and land, bomb deactivation, customs control, general ship surveillance and air medical services (The Icelandic Coast Guard Act 52/2006).

The ICG was founded in 1926 and guards one of the most challenging oceanic areas in the world, covering around 1.8 million square kilometers (ICG, n.d.-a). Since 1975, the territorial waters around Iceland extend to 200 nautical miles, almost reaching Greenland in the north and the Faroe Islands in the east (ICG, n.d.-a). The ICG headquarters are in Reykjavik and the Coast Guard has more than 200 employees, managing tasks such as medical transport, law enforcement and general surveillance on the ocean around Iceland (ICG, n.d.-b) The ICG manages search and rescue operations on sea and operates aircrafts
and vessels which play an important role in various rescue operations, both on sea and land (ICG, n.d.-b).

The Icelandic Joint Rescue and coordination Centre (JRCC) consists of MRCC (rescue at sea) and ARCC (aviation rescue) and is operated at ICG headquarters (ICG, n.d.-c). The centre is responsible for undertaking search and rescue operations and managing other participating teams in case of maritime or aviation emergencies (ICG, n.d.-c). Captains and crews of other ships and vessels are under legal obligation to assist the ICG in accidents or other serious events at sea, and the ICG is responsible for managing their participation and assistance (ICG, n.d.-c).

In the contingency plan on response to a cruise ship disaster on Faxaflói bay, the ICG has the defined tasks of giving expert advise on maritime rescue and managing search and rescue operations, as well as recovering injured and dead from the sea. Among other tasks is to provide information to media and secure the accident site while the incident is investigated (Civil Protection, 2016-a, p. 42).

The ICG owns three helicopters, three ships and one airplane (ICG, n.d.-d). The airplane is especially equipped to withstand Arctic conditions and increased the search and rescue capacity of the ICG considerably upon arrival to Iceland in 2009. The combined transport capacity of the helicopters is 58 people, but the plane can carry from 12-22 passengers (ICG, n.d.-d).

The ICG cooperates on an international level and Iceland is a part of the Arctic Coast Guard Forum [ACGF] (Nilsen, 2017). The forum was formed by Russia, Norway, Iceland, the United States, Greenland, Canada, Sweden and Finland, and in March 2017 a doctrine on future information sharing on operations in the Arctic and Baltic area was signed (Nilsen, 2017). In September 2017, a live search exercise was held in the Faxaflói bay area in Iceland, using vessels and aircrafts from several of the countries (Nilsen, 2017). The exercise proved useful in developing important guidelines in coordinated operations, and in case of emergency those countries have now practiced cooperation in search and rescue missions in the arctic area, increasing safety and reducing response time (Nilsen, 2017; The Icelandic Coast Guard, 2017). The Icelandic Coast Guard helicopters are used for rescue on sea and land and rescue operations involving tourists have become a big part of all search and rescue
operations. The helicopters and plane were called out over 250 times in 2016 (The Icelandic Coast Guard, 2016)

3.4 The MPRO [SÁBF] system

Icelandic disaster and emergency responding units work according to a system which in daily use is called the SÁBF system. It stands for stjórnun, áætlun, bjargir and framkvæmd, or management, planning, resources and operations [MPRO] (Civil Protection, 2016-b).

The MPRO system is used on every level of search and rescue operations and by all of the responding units (Civil Protection, 2016-b). The management part would oversee the work of operating units, assess needs and manage communication with media (Civil Protection, 2016-b). Those who take care of the planning would need to have good overview of the operation and both recieve and give information to the other units as well as organizing the procedure, assessing which resources are required in each place or area and numerous other details (Civil Protection, 2016-b).

Managing resources can include setting up telecommunication facilities, crisis centers and making sure that all equipment needed is brought on site, as well as providing sanitation facilities, resting areas, food and other basic necesseties for both rescue units and the people involved (Civil Protection, 2016-b). Lastly, operations is what has to do with those working directly at the scene of the accident or emergency and includes search and rescue operations, assessing injuries, triaging, receiving and transporting resources and registration of those involved (Civil Protection, 2016-b).

3.5 The categorization of emergency levels

The civil protection emergency levels are shown in figure four. The levels are used according to Regulation on Categorization of Civil Protection Emergency levels (Regulation 650/2009). The levels are color coded and each level is divided into four sublevels indicated by numbers (Civil Protection, n.d.) When reporting an incident to responding units, the Emergency service or 112, the color codes are used to explain the gravity of the incident and the responding parties can act accordingly.
Figure 4 The emergency phases

Green marks the uncertainty phase where no actual actions are taken by the responding groups, but experts and scientists might confer and plan for possible outcomes. Yellow marks the Alertness phase, where responding teams and groups prepare to take action and in some cases some measures are needed. The Red area means that there is already a situation going on which requires action on behalf of responding teams and measures are taken according to existing plans. Black stands for national threat, and is declared in cases like an influenza pandemic or more severe earthquake or volcanic eruption cases, where the impact is felt in many places at the same time and causes disruption in the life of most of the nation (Civil Protection, n.d.; Regulation 650/2009).
Figure 5 The 112 service system

As shown in figure five, the National Emergency Number or 112 (Neyðarlínan) has direct access to every responding party in Iceland and will evaluate which parties should be called out, depending on the incident reported (112.is, n.d.). The contingency plan which describes the reaction should it come to a cruise ship disaster in Faxaflói bay explains how in case of a maritime accident, the Coast Guard notifies the Emergency Number and gives directions of which color code should be used when activating the response (Civil Protection, 2016-a, p.15).

4 Tourism
The fact that many tourists visit Iceland every year has been established, but perhaps it is helpful to look at how many people there are here year round and how this might influence the society in whole. According to numbers gathered by the Icelandic Tourist Board [ITB], the numbers of tourists visiting Iceland has gone from a little less than 500,000 in 2010, to 1.8 million in 2016 (ITB, 2017-a).
Figure 6 - The number of tourists in Iceland on a monthly and daily basis 2016

Figure six shows that every day of the year, thousands of tourists are traveling the island and the summer months are still the busiest time. Passengers arriving by cruise ships are not included in the numbers shown (ITB, 2017-b).

In a recent risk assessment report on the risk of glacial leaps by Magnús Tumi Guðmundsson, Magnús Tumi Guðmundsson, Emmanuel Pagneux, Matthew J. Roberts, Ásdís Helgadóttir, Sigrún Karlsdóttir, Eyrjólfur Magnússon, Þórdís Högnadóttir and Ágúst Gunnar Gylfason (2016), it is stressed that contingency and evacuation plans need to be revised regularly with regards to a growing number of tourists (Magnús Tumi Guðmundsson et al., 2016) The report was made due to imminent risk of glacial leaps in Öræfajökull glacier and Markarfljót river and shows how the number of tourists is sometimes even higher in the risk area than the number of people living there. Emmanuel Pagneux (2015) had pointed this out in his article on evacuation time in the Öræfajökull area and the Environment Agency of Iceland further declared that it would present problems evacuation of thousands of tourists should it come to a volcanic eruption in the South region of Iceland (Environmental Agency of Iceland, 2017). Older contingency plans only assume that evacuation is needed for local residents only, but the situation has changed and the plans need to be updated accordingly (Pagneux, 2015, p. 155; Environmental Agency of Iceland, 2017).
4.1 Cruise ship hazards

Joan P. Mileski, Grace Wen-Yao Wang and Lamar Beacham (2014) wrote an article on the reasons for maritime mishaps and disasters. Among their findings was the fact that even though a lot of literature exists on cruise ship traffic, it often focuses on the tourism marketing and profit side, rather than the safety and precautions on board the ships or actual cruise ship mishaps and disasters (Mileski, Wang and Beacham, 2014).

According to statistics, cruise ship accidents are very rare (Vairo, Quagliati, Giudice, Barbucci and Fabiano, 2017). They can however cause great damage to the environment and affect coastal societies greatly (Vairo et al., 2017). According to figure seven, the reasons for why cruise ship accident happen vary, but most of them seem to be caused by foundering, but that is when a ship fills with water and sinks (Vairo et al., 2017).

![Figure 7 - Reasons for cruise ship accidents](image)

It seems that because of how rare cruise ship accidents are, security measures on board the ships might sometimes be taken to lightly and rehearsing reactions becomes routine (Mileski, Wang and Beacham, 2014). This could lead to cruise ship crews and passengers to be caught off-guard in case of an emergency, and there is reason to pay more attention to the risks and hazards concerning cruise ship accidents (Mileski, Wang and Beacham, 2014).

5 Cruise ship accidents

The case in this paper will partially be built on the MV Estonia accident which took place in the Baltic sea in 1994 and the stranding of cruise ship Maxim Gorky near Svalbard in 1989. This chapter describes these two incidents, the rescue operations and reactions.
5.1 The MV Estonia accident

Most of the following information on the MV Estonia accident is taken from the final report issued by the Joint Accident Investigation Commission of Estonia, Finland and Sweden report [JAIC](1997) on the incident, made after an agreement by the prime ministers of Estonia, Finland and Sweden (JAIC, 1997-a).

The MV Estonia was a so called ro-ro ferry, which stands for roll on/roll off and indicates that passengers themselves drove their vehicles on board the ship and off again when reaching their destination (JAIC, 1997-b). Investigation has indicated defect visor locks caused the front visor, or the trap door where the cars drive into the ship, to fall off. This made way for water flowing into the ship and finally causing it to capsize and sink (JAIC, 1997-c).

At the night of the accident, September 27th 1994, the ship was sailing through the Baltic sea on its way to from Estonia to Stockholm, Sweden, carrying 989 people (JAIC, 1997-d). The sailing conditions got rough out on open sea and the waves were 3-4 meters high, making many of the passengers sea sick (JAIC, 1997-d). On board were about 803 passengers and almost 186 crew members (JAIC, 1997-d). Around 1.30 am the MV Estonia sent out a Mayday call, which was heard by nearby vessels and the maritime rescue coordination center in Turku, Finland (JAIC, 1997-d). Passengers who survived the accident described their experiences:

Passengers started to rush up the staircases and panic developed at many places. Many passengers were trapped in their cabins and had no chance of getting out in time. Lifejackets were distributed to those passengers who managed to reach the boat deck. They jumped or were washed into the sea. Some managed to climb into liferafts which had been released from the vessel. No lifeboats could be launched due to the heavy list. (JAIC, 1997-d)

A documentary based on the report of the JAIC and directed by Clive Maltby (2007), recounts the events the last hour before the ship sinks and shows interviews with a few of the survivors. They describe the short time passing between the moment where people realized something was really wrong until the ship sank (Maltby, 2007). They also agree on that no real warnings were given and the only warnings heard were in Estonian and probably not given by the captain or anyone in the bridge (Maltby, 2007).
The first Mayday call from the Estonia was heard at 1.22am and picked up by the passenger ferry Mariella which was located about 9 nautical miles (17 kilometers) from the Estonia (JIAC, 1997-e), but figure eight shows the accident location and which ships were in the area. Mariella arrived at the scene of the accident about one hour later, only to find that the ship had sunk and people were floating around in the water and screaming for help (JAIC, 1997-e). Around 5am, four helicopters and eight ships were at the scene, but only 138 people were rescued alive, the last one at 9am (JAIC, 1997-e). Due to difficult circumstances the ships were unable to get many people on board and the helicopters rescued over one hundred survivors and 94 dead bodies from the waters, but more than 750 people were never found (JAIC, 1997-e).

![Figure 8 - The location of the MV Estonia accident](image)

It proved difficult to find material on the reaction and action in the aftermath of the Estonia accident, perhaps because the survivors came from many countries and had returned to their homes about 24 hours after being rescued. In 1996 however, the University and the Åbo Akademi issued a report on crisis intervention after the accident. Salli Saari and her colleagues (1996) describe how a team of Finnish psychologists and the Finnish Red Cross had made an agreement on providing emergency assistance should it come to a disaster (Saari, Lindeman, Verkasalo and Pritz, 1996).
Most of the survivors, or 99 out of a 137, were brought to several different hospitals in the south of Finland, but then they were brought to hotels where they were protected from the media and given time to rest and talk to other survivors, as well as having access to psychologists (Saari et al., 1996).

Before reuniting with their families, the survivors participated in a few hours debriefing sessions the morning after the incident (Saari et al., 1996). The debriefings were led by psychologists from the emergency team, and according to the report most of the survivors had united with their families later that evening (Saari et al., 1996). There was no conclusion on whether or not this method of the survivors discussing their experience in groups before meeting their loved ones was beneficial or not, even though there were some indications that women responded better to the sessions than men (Saari et al., 1996).

Filip K. Arnberg (2011) and other experts did research on the frequency of Post Traumatic Stress Disorder (PTSD) fourteen years after the incident (Arnberg, Erikson, Hultman and Lundin, 2011). The research describes how most of the surviving passengers attended regular meetings with crisis groups and that annual meetings were held until ten years had passed from the accident (Arnberg et al., 2011). Their research showed that around 27% of the survivors showed symptoms of PTSD after the fourteen years. (Arnberg et al., 2011). Almost all of the survivors were men, but physical condition was important in order to get out of the ship and stay alive, resulting in the majority of survivors being men between the age of 20-50 years (Arnberg et al., 2011; Saari et al., 1996).

The final report does not address the issue of salvaging the wreckage or the dead bodies remaining inside the ferry, but Hugo Tiberg (2000) describes in his article how an ethical council appointed by the Swedish government concluded that the bodies still remaining in the ship, should not be retrieved (Tiberg, 2000). The governments of Sweden, Finland and Estonia, as well as the ship owners, decided on covering the wreck with and banning all diving or attempts to retrieve wreckage or dead bodies from the site (Tiberg, 2000).

5.2 Maxim Gorky
A New York Times news report by Steve Lohr (1989) describes a cruise ship incident involving a Soviet passenger ship, Maxim Gorky, carrying around 1000 people from Iceland to Norway in 1989. The ship hit an iceberg off the coast of Svalbard and the damage caused the ship to list heavily, but not sink (Lohr, 1989). In the timespan of only seven hours, almost everyone
on board the ship had gotten into lifeboats and been rescued by the Norwegian coast guard rescue vessel, Senja (Lohr, 1989).

A Washington post report describes how 120 crew members stayed on board the ship to keep it afloat, but the passengers made it into the Senja and those injured were transported by helicopter to Longyearbyen in Svalbard. According to passengers interviewed, most of the people remained calm and were willing to assist each other in getting out of the ship and onto lifeboats (Washington Post, 1989).

The difference between the two incidents is mainly that the MV Estonia sank, whereas Maxim Gorky slowly listed but didn’t sink, giving people more time to put on life jackets and get safely onto the lifeboats. The weather conditions were more favourable in the Maxim Gorky incident but an Icelandic news report in DV newspaper (1989) describes that the temperature that night was around 1°Celsius and little wind. A description from one of the passengers says that there was fog and rain and that they were given whiskey and vodka to keep warm (Washington Post, 1989; DV, 1989).

The successful rescue operations and the fact that no one lost their life when the ship stranded could contribute to the fact that it has proven near impossible to find any information on what happened after the passengers were rescued and whether or not any social support was needed or provided.

5.3 The search and rescue exercise Spitzbergen

The following is a short summary of a live search and rescue exercise which was conducted in cooperation by the University of Stavanger and the Norwegian Coast Guard, on the north part of the Spitzbergen island, Svalbard in 2016. A report on the exercise was edited by Knut Espen Solberg, Ove Tobias Gudmestad and Bjarte Odin Kvamme and published in September 2016. The main purpose of the exercise, which in some ways reflects the situation faced by passengers of the Maxim Gorky, was to test the functions of safety equipment and see how it measured up to standards recently set by a regulation implemented by International Maritime Organization (IMO) (Solberg, Gudmestad and Kvamme, 2016). The regulation was implemented in January 2017 with the purpose of “identifying a gap between SOLAS approved personal protective equipment (PPE) and the requirements defined in the IMO Polar Code” (Solberg, Gudmestad and Kvamme, 2016).
After the Estonia accident survivors from life rafts described their experience. Two men described how they had tried to open a plastic bag, containing a flash light and a bailer. Their hands were too cold and trying to open the bag with their mouth resulted in one of them losing a few of his teeth (JAIC, 1997-f).

One of the findings of described in the report on the exercise, which was conducted more than twenty years after the Estonia accident, was that tasks such as opening water bags and zippers required fine motor skills, which proved difficult when hands got very cold (Solberg, Gudmestad and Kvamme, 2016). Oxygen levels in the lifeboat and raft became alarmingly low, which led to frequent ventilating of the rafts, letting the heat out (Solberg, Gudmestad and Kvamme, 2016).

The people participating in the experiment set out to endure the five days which is the time people are supposed to be able to stay and survive using the provided equipment (Solberg, Gudmestad and Kvamme, 2016). Every participant was in good health, well fed and rested and provided with suits to keep warm and keep water away from the body (Solberg, Gudmestad and Kvamme, 2016). Despite many favourable conditions, such as little wind and clear skies, every participant had left the life boat or raft within 24 hours, due to reasons such as low or dropping body temperature or low oxygen levels (Solberg, Gudmestad and Kvamme, 2016).

Of course, the conditions and conduction of the exercise is described in more detail in the actual report, but the important information drawn from this regarding the scenario in this paper, is that a perfectly healthy group of people with relevant and useful experience and in good health, using equipment meant to withstand the most extreme circumstances for five whole days, did not last for 24 hours on board a life boat or raft.

Ronald W. Perry (2004) writes about disaster exercise outcomes and explains that exercises in disaster management are an important factor in preparing different responding parties for future cooperation (Perry, 2004). For every possible responding party to participate in a disaster management exercise would lead to a smoother work relationship should there come to an actual disaster (Perry, 2004). Perry (2004) further concludes that crisis and disaster exercises can result in those participating to better recognize the emergency management systems and planning, as well as the capability of the other responding units.
The authors of the report written for the Nordic council of ministers in 2016, concluded that in order to prepare social services for their work in context of future disasters it would be important to include them in emergency management exercises (Eydal et al., 2016). In the report it is further concluded that the diverse roles of social services and how they can be of use on every level of disasters should be introduced to the emergency management systems (Guðný Björk Eydal et al., 2016). Equally important would be to introduce all levels of the disaster management system to those working within social services, ensuring good cooperation should it come to a disaster (Guðný Björk Eydal et al., 2016).
6 The scenario

In this chapter, the case scenario of a cruise ship accident is described including details such as environmental conditions, passenger demographics, location and other relevant information. The details of the scenario are mostly based on official reports and numbers, but some of the description is based on the authors knowledge of the area and local culture.

6.1 Ísafjörður and cruise ship traffic

As shown in figure 9, the number of cruise ships visiting Ísafjörður harbour has increased rapidly in the last decade. Over 100.000 people visit the town every year by ships of various sizes and most of the ships make a few stops along the way around the island (Ísafjörður harbour, 2017)

![Figure 9 Cruise ship traffic in Ísafjörður](image)

Ísafjörður is the biggest town on the West Fjord peninsula with about 2500 inhabitants (Statistics Iceland, 2017) and important resources such as a hospital and an airport. The main industry of most of the towns in the area is fishing, so boats are accessible and many capable people to assist in rescue operations.

6.2 The ship and passenger demographics

The cruise ship in question is on its way from Ísafjörður to Akureyri in the beginning of July and on board are 1200 people, 850 passengers and 350 crew members. About two thirds of the passengers come from Germany, The United States and the United Kingdom. This is consistent with numbers from a report written for the Icelandic Tourism Research Centre by Edward H. Huijbens and Kristinn Berg Gunnarsson in 2014. According to the report the crews
usually consist of many different nationalities and hierarchy is clear within the group of crew members (Huijbens and Gunnarsson, 2014). In a demographic chart published by the Port of Akureyri (2017), the passengers of the 155 cruise ships visiting Akureyri in 2017 were of 99 different nationalities, compared to 86 nationalities in 2015 (Huijbens and Gunnarsson, 2014; Akureyri Harbour, n.d.). In figure eleven is an estimate of the passengers age distribution, based on information and reports mentioned in this chapter.

![Age of passengers on board](image)

**Figure 10 Age of the passengers on board**

According to demographic information gathered by the maritime cluster *Wind Rose*, the average passenger on board cruise ships is caucasian (93%), around 46 years old and has an education (*Wind Rose*, n.d.). More people can now afford to go on cruises, but before it was a certain high-income elite who was able to enjoy a luxurious cruise to distant places (*Wind Rose*, n.d.). This means a larger and more diverse group of people are now traveling by ships, and there has been an increase in people traveling with their children (*Wind Rose*, n.d.).

### 6.3 Location and conditions

Indicated in figure 12 is the accident location. Hornstrandir, the northernmost tip of the West Fjord peninsula is a nature reserve where there are no roads or permanent residents but visited by a thousands of people every year. In a report on Hornstrandir by Jón Björnsson (2013), it says that close to 6000 guests visited the reserve and more than half of them were cruise ship passengers. According to a news report on cruise ship traffic in the area, the Environment Agency of Iceland, in cooperation with local authorities, is working on a plan on
how to prevent damage from this new challenge to Icelandic least travelled areas (Halla Ólafsdóttir, 2017).

![Figure 11 - Accident location](image)

When sailing past the West fjord peninsula, many cruise ships have been coming closer to land than they are supposed to. The national broadcasting service [RÚV] (2017), reports how ships sail to places not indicated on the itinerary, transporting their passengers by Zodiac boats on to protected areas like the Hornstrandir nature reserve (Halla Ólafsdóttir, 2017).

The scenario surrounding the cruise ship in question are only the impassable cliffs of Hornstrandir, more than 400 meters high, and the Greenland sea which is rarely warmer than 8°Celsius at this time of year (NAT, n.d.; World Sea Temperature, 2017). For comparison the temperature of the Baltic sea when the MV Estonia sank was 11°Celsius (JAIC, 1997-d).

The main difference between the circumstances of this accident and the MV Estonia accident is that in Iceland during summer, it doesn´t get dark. This makes all search and rescue operations easier as well as increasing the likelihood of people finding something to hold on to or keeping an eye on others around them.
The closest towns to the ship are Bolungarvík and Ísafjörður, but since there are no roads leading to Hornstrandir nature reserve, shown in figure thirteen, the only way to reach the area is by boat or an aircraft. At this time of year smaller boats might be fishing south of Hornstrandir but they usually stay closer to the harbors.

The accident takes place around 1am when the captain decides to go a little closer to land than usually. The ship’s equipment fails to detect a narrow reef and as the ship sails over it a few meters long rift opens at the bottom of the ship and water starts to seep in. Before long the crew members working below deck, as well as the captain, realize that something is wrong. The captain decides to turn the ship, but this only increases the damage and lets more water flow into the ship. The passengers start waking up, soon realizing something is wrong. An alarm is given through the speaker system and people start to leave their cabins and attempt to get on deck where panic starts and people start to look for life jackets and ways to get into life boats or rafts.

As described in the Estonia incident, the listing of the ship made it difficult for people to get out. People fell to the side of the ship facing the water, unable to climb up and out of the ship (JAIC, 1989-d). The event, like in this case, took place in the middle of the night and many of the passengers were sleeping in their cabins when the ship started to list (JAIC, 1989-d).
At 2am the captain sends out the first Mayday call and has his crew shoot a few emergency flares to attract the attention of nearby fishing boats. People are told to get out of the ship, wear life wests and some people have already started trying to release life boats. A few life rafts have already been thrown in the ocean and there are people in the water, trying to reach the rafts.

Stated in a regulation on aviation and maritime search and rescue management (2011), all seafarers are obligated to aid if they can do so without risking their own lives (Regulation 71/2011). A few smaller boats are located about 20 nautical miles south of the ship and each boat could carry around 15-20 extra people, depending on whether there is fish on board or not. Common fishing boats are the Cleopatras and the working deck of an average sized Cleopatra is about 20 square metres and each boat has two bunk beds (Cleopatra, n.d.).

The Mayday call reaches the Coast Guard, which notifies the National Emergency line, 112, and a general plan for maritime accidents is activated immediately by the code red, level one. Perhaps an incident of this magnitude would call for a national emergency code black, but this would be decided by the Coast Guard. According to Hlynur Snorrašon, the Ísafjörður chief of police, a contingency plan for a maritime accident in this area is being developed. Until it has been officially issued, responding units work according to a general plan for maritime accidents or mass disasters (Hlynur Snorrašon, personal communication, November 24, 2017).

6.4 Rescue operations and procedures
A number of responding units are notified in the case of bigger emergencies. The police, search and rescue teams, the Red Cross, fire departments and the police special forces are called out and the National Crisis Co-ordination centre[NCCC] is activated (Civil Protection, 2016-a).

The Ísafjörður Red Cross division and the Reykjavík Red Cross would immediately go to a formerly designated building serving as a crisis centre. At this time there will only be need for assisting the rescue teams and creating facilities for receiving and providing information and other resources. In Ísafjörður, the elementary school has the role of a crisis center in times of need. Preparations will be made according to basic guidelines issued by the Red Cross on opening a crisis centre, creating facilities for registration, food and water supplies and a resting area (Red Cross, n.d.-d)
According to the Faxaflói bay contingency plan, the Coast Guard manages operations at sea and the NCCC makes sure that all corresponding teams connect and operate according to plans (Civil Protection, 2016-a, p.28). The NCCC is usually located in Reykjavík, but in this operation it might be moved to Ísafjörður so that management has a clearer view over what is happening and is in closer connection to the responding units.

While preparations for rescue operations take place on land, the passengers try to leave the ship as it slowly tilts more and more to the side. Attempts to turn it have not worked and the ship is listing about 30°. According to the report on the Estonia accident, it was concluded that when the ship listed more than 45°, it became very difficult for those inside to get out of the boat, unless they were physically fit, had help from the outside or access to useful equipment (JAIC, 1997-e).

The local communities would quickly be aware of the situation and many fishing boats and ships would head in direction of the cruise ship. About ninety minutes after the Mayday call is heard, the first helicopter arrives to the scene and at the same time, a few smaller boats are approaching. Another Coast Guard helicopter is on it’s way, but the third one is away on a mission abroad, but due to cut down in funds to the ICG, they need to raise money by renting their equipment to other countries (Stígur Helgason, 2017).

The scenario facing the rescue teams is that about 250 people have already gotten onto lifeboats and rafts, but many are cold and wet. About 350 people are on deck hanging onto the ship itself, but some fall off and into the ocean. Inside the ship people are trying to get out. Some are injured from climbing, others are stuck in their cabins and a part of the crew remains on board and tries to assist those who cannot get out by themselves. The ship is listing heavily and the wind has reached 13 metres pr second and the waves are between one and two metres high.

According to numbers found on the USA Search and Rescue Task Force website (UASSRTF), the average survival time in water 4-10 °C is about 30-90 minutes and time before exhaustion about 15-30 minutes (USSRTF, n.d.). Considering that it took the Mariella about one hour to sail the 17 kilometers to the Estonia and the fact that not many ships and boats are expected to be around this area in Iceland in this scenario, it is not unlikely that those who go into the water will not be rescued until after about one or two hours.
At this point it is clear that the number of casualties will be considerable and hundreds will need medical assistance. The hospital in Ísafjörður has 15 beds, including three belonging to the maternity ward (Ísafjörður hospital, n.d.) and the hospitals in Reykjavík have close to 700 beds (University hospital of Iceland, 2017) and the survivors would most likely be brought to Reykjavík as soon as possible.

There are other useful places in the area and it would also be an option to operate from Norðurfjörður, which is a very small and isolated place with less than fifty permanent residents in the area (Icelandic Association of local authorities, 2017), but it is closest to the scene or about 70 kilometers to the south. Gjögur airport is located about 20 kilometers from Norðurfjörður and could be a service location for aircrafts used in the operations. Norðurfjörður also has a small harbour and a local guesthouse could serve as a crisis centre or an area to gather those who are injured or deceased.

Should it come to a cruise ship accident in this area, conditions like weather and the number of people involved would affect the rescue procedures and where people would be taken. It might prove difficult to keep a detailed list of who is brought where, since the main focus is on getting people to land as soon as possible.

7 Social work and the disaster cycle

This chapter is about the possible roles and tasks which can be carried out by social workers and the social services in the context of the cruise ship disaster described in the previous chapter.

7.1 The disaster phase - Cooperation with the Red Cross

The report on local social services in Nordic countries stresses the importance of cooperation between the social services and the Red Cross, the Icelandic Red Cross being the largest volunteer organization providing social aid in times of crisis (Eythal et al., 2016, p.6). The many volunteers of the Red Cross provide social assistance and have an official role when it comes to psychological support and traditionally handle social matters in times of crisis. The Red Cross perhaps has stronger historical roots than official social services in Iceland, particularly in smaller communities (Guðný Björk Eythal et al., 2016, p. 123 - 125).
Looking at the definition of social work mentioned in chapter one, it is meant to help people through life challenging events and caring for their general well being (IFSW, 2014). This aligns with the main goals of the Red Cross and Crescent world wide, such as humanity and impartiality (International Federation of the Red Cross, n.d.)

In the Social Services Act (Lög um félagsþjónustu sveitarfélaga) (1991), it says that local social services are obligated to give social support and advise in times of need. Since the Red Cross has a legislative role in disaster management, cooperation between the social sector and the Red Cross could prove effective and serve various purposes.

In a report on long term effects of natural disasters a chapter on psychological aid by Margrét Blöndal and other experts (2008), describes how a Red Cross humanitarian centre was used by social services to provide psychological support and information to those who lost their homes or experienced other social difficulties after a large earthquake hit South Iceland in May 2008 (Margrét Blöndal, Eyrún Jónsdóttir, Jóhann Thoroddsen, Anna Björg Aradóttir and Víðir Reynisson, 2008, p. 133).

This shows that the main concepts of social work and the Red Cross humanitarian work go together and cooperation has proven successful before. This could be a good foundation for further cooperation.

7.1.1 Gathering and providing information
Like Gillespie and Danso (2010) have stated, information is one of the five most important things needed in times of crisis. During the disaster phase, gathering and providing information to survivors and their families would mostly take place in emergency centres set up by the Icelandic Red Cross (Red Cross, n.d.-b).

All important information on the situation and conditions of the people involved in the incident is gathered by the local police commissioner and the Coast guard (Civil protection, 2016, -a). The local police handles information of matters such as number of casualties and the condition of survivors which would be forwarded to the emergency centres, hospitals and other places where the information is needed. According to the Faxaflói bay plan, the Red Cross and the shipping company give information about survivors to their relatives (Civil Protection, 2016-a, p. 28).
In a report made after the Estonia accident by Salli Saari and colleagues (1996), it is pointed out that it is crucial that both the survivors and their relatives get accurate information about what exactly happened and why. This can help them recover better and is useful when it comes to dealing with posttraumatic stress disorder or PTSD (Saari, Lindeman, Verkasalo and Prytz, 1996).

7.1.2 Other tasks during the disaster phase
Translating services are not mentioned particularly in the Faxaflói bay plan, but it is likely that a translator service is needed since the passengers and crew come from all over the world. Many Red Cross volunteers and social workers have experience from working with translator services in their work and one of their tasks during the disaster phase could be contacting those services and preparing access to them when needed.

There are numerous other practical tasks such as gathering clothes and other necessities for the survivors, since it is unlikely they would have carried much of their personal belongings when leaving the ship. Preparing meals for rescue units and survivors, providing materials and many other things are all necessary parts of the disaster management work. Perhaps bringing in willing social work students to assist could be useful, depending on how far they are along in their studies and whether they have relevant experience.

As was the case with the Estonia, the passengers of the ship come from many different countries, so representatives from embassies and different religious groups would need to be contacted. The shipping company and travel agency could provide important information about passengers and the local police or the Crisis Co-ordination center would gather such information (Civil Protection, 2016-a, p.28).

The use of social media is a good way to distribute information to friends and relatives and more and more people rely on it for receiving information. Using social media could relieve some pressure of the local police or the emergency line. In the The United Nations Refugee Agency [UNHCR] handbook on emergencies by Imogen Wall (2012) it says about mass communication with communities that with careful planning and co-operation of institutions, social media can be of great use in distributing information and reaching out in case of emergencies.
7.1.3 Psychological first-aid and psychosocial support

The social services have an official agreement on providing psychological first aid and trauma support made with the Red Cross, Directorate of Health and other institutes (Civil Protection, 2015). This agreement is issued by the Department of Civil Protection and Emergency Management and states that the local social services has a defined role when it comes to assessment and specialized support for trauma victims or those exposed to disasters (Civil Protection, 2015).

According to a guide on psychological first aid, published by the World Health Organization [WHO] (2011), the aid serves the purpose of preserving dignity in crisis response and has been used since the second world war. It has gotten more attention over the last decade or so, and is deemed more appropriate during the period immediately after a crisis than other psychosocial methods which dig deeper into the effects of disaster or trauma and would be applied during the disaster and response phase (WHO, 2011).

In his article on psychosocial support in international emergencies, Michael G. Wessels (2009) addresses some of the more important issues concerning psychosocial support. He says that a holistic view of situations identifies quality work when it comes to psychosocial support and that people with less experience might be more clinically inclined and approach the situation from a single angle, rather than viewing it holistically (Wessels, 2009).

He also points out that psychosocial assistance is often provided in a single level way, rather than approaching it on multiple levels (Wessels, 2009). He says that well meaning people with good education only intend to help, but those who suffer won’t benefit from that help when a holistic view of the situation is not applied (Wessels, 2009) However, the psychological trauma and distress people experience after disasters has become better recognized and gained a lot of attention in the last years, especially after the tsunami in Asia in 2004 (Wessels, 2009).

Even though Wessels article is directed at psychologists dealing with a more long term effect of disasters, it does stress the importance of approaching people suffering from trauma from a holistic point of view, taking all aspects of their lives into consideration. A holistic approach to assessing peoples situation is a key concept in all social work education and their knowledge therefore relevant when working with people after disasters.
In the case of the cruise ship accident, social workers and Red Cross volunteers with training in psychological first aid would use their training for both responding units and the survivors if they are brought to the emergency centers. It is also important to keep in mind that local people would most likely be the first responders while waiting for other search and rescue teams, equipment etc.

Local social services must gain focus and oversight very quickly and be kept up to date as well as everyone else. Watching dead bodies being brought to the town for temporary storage could prove traumatic for the local residents and tourists visiting the area, and no one would be left untouched by the procedure. Vulnerable groups in society, perhaps especially children would need attention and information. Guidelines by the International Federation of the Red Cross Centre for Psychosocial support (2009) explain that children need special attention in times of crisis and need information just as much as the grown up people (IFRC, 2009, p. 84).

Cooper and Briggs (2014) mention that it is often forgotten that people who are directly involved in the rescue operations should be offered and will most likely need some psychological support. It would therefore be necessary to call in people who have not been directly involved or experienced the devastating situation (Cooper and Briggs 2014).

Icelandic social workers have had important training in psychological first-aid as well as knowing the basics of emergency management. As all social workers they are trained to identify the more vulnerable groups of society, how to reach and communicate with them as well as having learnt basic psychology and conversation techniques (University of Iceland, n.d.; University of Iceland, 2016). This should make social workers a valuable addition to emergency and disaster management and their contribution in psychological and psychosocial support an important addition to the services already provided by the Red Cross.

7.2 The response phase and social work
The disaster and response phases can overlap in certain areas and it can be difficult to see when the disaster phase ends and the response phase begins. Some of the tasks carried out during the disaster phase also need to continue throughout the response phase, such as providing information and attending to basic needs.
When 24 hours have passed it will be more clear how many people have died, how many are critically injured, lost etc. This is when the planning for the recovery phase takes place, search and rescue units are returning home and the facts are settling in with those involved and the families overseas.

Families of those not found or injured would most likely visit Iceland and could need assistance with practical matters such as insurance, communication with doctors and understanding the health care or the search and rescue procedures in Iceland. After a bus accident involving Chinese tourists in Iceland in 2017, where one person was killed and more were critically injured, families of the passengers immediately travelled from China to Iceland to see their loved ones (Embassy of the people’s republic in China, 2017).

Receiving information requests and responding to them, providing basic needs and getting survivors in touch with the services they need will take some time, perhaps a week or more. Police authorities, the ship owners and the Coast Guard decide which information to give to the media and when (Civil Protection, 2016-a, p.28). In an accident this big, media attention could prove overwhelming at first and protecting the survivors and their families from the attention could be a possible task for social workers working at hospitals.

There are eleven people working in the social services department of Ísafjörður municipality (The municipality of Ísafjörður, n.d.), and at the University Hospital in Reykjavík there are around 50 social workers working in various departments (Landspítalinn, 2016). This is not a very large group of social workers and perhaps this would be an opportunity to seek assistance from social work students to handle paperwork and other tasks required in the first days after the accident.

7.3 The recovery phase and social work
This chapter focuses on the recovery phase and particularly the process concerning the retrieval and transport of bodily remains, support to family members and the survivors how local societies recover from such events. During the disaster phase, psychological first aid was one of the main tasks, but when time passes, general psychosocial support for those who suffered during the disaster phase might be needed.
7.3.1 Identifying and transporting bodily remains

There is not much information on transporting bodies to other countries for burial from Iceland. On the information website of Register Iceland (island.is), there are some information about the matters of transporting bodies between countries and according to them, the process of having a body moved from Iceland might take time and substantial paperwork (Register Iceland, n.d.).

Methods of transport vary, but for instance cremated remains of US citizens can only be transported by the United States Postal Service, following detailed instructions and for sending bodily remains to the Philippines at least six different certificates are needed (USPS, 2014; Philippines Airlines, n.d.). Lizzie Presser (2017) tells in her news report that people from the Philippines are about one third of all cruise ship workers worldwide. Familiarizing with rules and regulation on bodily remains could be one of the tasks social workers could assist on in cooperation with funeral homes and insurance companies.

Social workers in hospitals are used to dealing with paperwork concerning discharges and could use their knowledge and experience to assist with this challenging task, as well as providing psychosocial support to families of those who might not be retrieved from the ocean. Dead bodies can wash up on shores around Iceland for weeks and months after the accidents and every time a body is found an identification process begins. This causes distress and grief for the families who are still waiting for closure.

A report was made about identifying bodies from the Estonia ferry after the accident in 1994. The report states that it took 33 days to identify 93 bodies, mostly through medical and dental records (Soomer, Ranta, Penttilä, 2001). It is also stressed that it is of great importance for the families that the process of identifying bodies doesn’t take long, but the remains of the 94th victim were found a year and a half after the accident (Soomer et al., 2001).

According to information from Arnar Pálsson (2017) for the Icelandic Web of Science, Iceland has no facilities when biopsies or DNA samples need to be processed in criminal cases or to identify bodies. All samples need to be sent abroad to be analyzed, mostly due to lack of expensive equipment and technology in Iceland (Arnar Pálsson, 2017).

The prolonged identification process anticipated in Iceland is likely to have negative effect on the mental state of those affected. This could prove to be a challenge for the social
services and it’s not easy to predict the number of people requiring support or for how long they would need it.

7.3.2 The local communities
The people of Ísafjörður and surrounding area are no strangers to disasters or dealing with difficult situations. Ásthildur Elva Bernharðsdóttir (2001) describes how two avalanches fell in the area in 1995 with devastating consequences. The avalanches fell in the small towns of Súðavík and Flateyri, both located about 20 kilometers from Ísafjörður. Thirty four people were killed and the community was paralyzed for a length of time afterwards (Ásthildur Elva Bernharðsdóttir, 2001).

The Civil defence committee of Ísafjörður played a big part when it came to organizing operations in Súðavík and difficult decisions needed to be made with great haste (Ásthildur Elva Bernharðsdóttir, 2001). In a research done by Edda Björk Þórðardóttir (2016) on the long-term effects of the disasters in Súðavík and Flateyri, results showed that the survivors were still showing symptoms of PTSD 16 years after the events occurred and that there is much need for long term PTSD treatment for communities struck with disasters (Edda Björk Þórðardóttir, 2016).

A tragic event like a cruise ship disaster is likely to affect local communities in many ways. Daily routine is disrupted and the recovery phase does not only apply to the people on board the ship and their families. The surrounding communities where intrusion of the media, visits from grieving relatives, transport of injured and dead people and global attention will have great effect on peoples lives for a long time after the rescue operations are over. Old memories from tragedies in the past might come up and this would require special attention. This is the period where social workers can use their specific skills to support their local community and contribute to the process of getting life back to normal and providing psychosocial support to those who suffer. Members of rescue teams and other responding parties would most likely be provided with some sort of mental assistance and organizing that work could very well be a task for social workers.

7.4 Mitigation and preparedness
In her article on social work interventions in disaster situations, Lena Dominelli says that the United Nations should pay more attention to social workers and include them in disaster
relief work. Social workers could contribute to a more bottom up approach where the community itself is involved in the process of rebuilding and therefore better aware of what the plans are and how to carry them out (Dominelli, L., 2015).

The report on long-term response to natural disasters by Sólveig Þorvaldsdóttir, Ásthildur Elva Bernharðsdóttir, Herdís Sigurjónsdóttir, Geir Oddsson og Guðrún Pétursdóttir (2008), the experiences of municipalities where disasters have struck are analyzed. The report stresses the need for a holistic approach when it comes to dealing with disasters and the long-term effects, and that social and health related factors are important as well as cost analysis and rebuilding engineering (Sólveig Þorvaldsdóttir et al., 2008). The part of local authorities in disaster response is addressed and pointed out that the focus of government and municipalities has primarily been on search and rescue and first responses, but the process of rebuilding has been left out of contingency planning and the connection to local authorities and their responsibilities in regards of rebuilding is lacking (Sólveig Þorvaldsdóttir et al., 2008).

Namkyung Oh, Louise K. Comfort, Namkyung Oh, Gunes Ertan and Steve Scheinert (2010) write about disaster mitigation and response in their book Designing Resilience-Preparing for extreme events. They go as far as stating it can prove threatening to communities when authorities fail to recognize risks and no, or inadequate, measures are taken in preparing for crisis or disasters (Comfort et al., 2010, p.33)

In the same book, Thomas A. Birkland addresses the same issue and explains how mitigation and preparedness gets much less attention than immediate response and governmental focus is usually not on preparing communities for disaster, but only providing relief and support in the direct aftermath (Birkland, 2010, p. 106).

John Tesh’s (2015) recent report on trends in crisis management in Europe written for the World Humanitarian Summit, indicates that there might be some changes in the attention given to the preparedness stage and that the governments of the so called Europe and others group, which Iceland is a part of, are focusing more on the importance assessing needs and reducing vulnerability (Tesh, 2015). It also seems that learning from past disasters is having more effect on the making of contingency plans and implementing those past experiences in disaster and emergency management (Tesh, 2015).
Social workers have important insights into societies and taking part in preparing contingency plans is one of the tasks they can work on during the mitigation and preparedness phase of the disaster cycle. Analyzing demographics, identifying vulnerable groups and assisting local authorities including these issues in contingency plans could be an important contribution from the social work profession in preparing for disasters.

7.4.1 Contingency planning
Like mentioned in chapter six, Pagneux and his colleagues point out in their risk assessment in connection with recent volcanic activity in Iceland, that contingency plans need regular revision (Pagneux et al., 2017). This is especially relevant in regards to the increasing number of tourists and the increased risks created by the many people traveling in difficult conditions all year round (Pagneux et al., 2017).

The process of creating a contingency plan often starts with a local community or municipality identifying hazards and imminent danger, resulting in co-operation with local authorities. The local municipal management forms a protection committee, and according to Civil Protection regulations, the committees should consist of those from the municipal management who deal with the safety of the people in the possibly affected area (Civil Protection, 2017-b).

7.4.2 Practical tasks
The list of tasks for social workers in connection with this specific disaster is extensive. To summon up some of the tasks mentioned in the previous chapters, there is collecting and providing information, providing basic needs to both sufferers, locals and responding teams, assisting survivors and their families in finding each other and getting home. Contacting translators, providing psychological first-aid and support, registering those involved, identifying and attending to vulnerable groups in the local communities, working on contingency plans and do community work which prepares societies for future disasters. These are of course not all the tasks which can be carried out by social workers, but this list should give some indication that social work is relevant in disaster management.
There are numerous things which can be added to figure 14, but it shows that social workers could contribute important work at every phase of the cycle. Certain tasks can be moved between phases, such as educating and community work, but this gives some image of how social work is relevant to disasters and how social workers can have an impact on disaster management in Iceland.

María Bjarnadóttir (2016) wrote a BA thesis on tourism and disasters in Iceland where she talks about the vulnerability of tourists and how social workers can be of assistance to that particular group should it come to disasters. She interviews members of hospital staff who agree on how social workers might be better equipped to work with some of the situation which might come up concerning tourists in disasters situation and a better option and for instance doctors or nurses for those who might long term assistance (María Bjarnadóttir, 2016).
8 Conclusion

The goal of this paper is to answer the following research questions:

- In case of a cruise ship accident in Iceland, what would be the role of local social services and social workers?
- How can social workers contribute in the field of disaster management and are their skills being fully utilized in context of disasters?

Setting up a case scenario proved to be a helpful tool in analyzing which roles social workers could have when it comes to a disaster. Although it is not possible to predict the exact outcomes and procedures following such an incident, taking existing contingency plans and past experiences into consideration can be helpful in predicting the procedures to a certain extent. The list of possible tasks carried out by social workers is further based on the nature of social work education and training, as well as the legal framework social workers practice within.

The tasks are versatile and go from collecting clothes to assisting on sending cremated remains to other continents. Social services and social workers have a multifaceted role in case of a cruise ship accident and, of course, other disasters. Their education and training in working with the most vulnerable groups of society and the holistic approach to problem solving, gives social workers valuable insight into various situations and prepares them to work with complicated issues under demanding conditions.

This paper was written to direct the spotlight at how social workers can contribute to disaster management and how Icelandic society is facing new challenges in relations to the large number of people visiting the country every day. Adding a capable profession to the emergency management system could be a relief for those already working in the field and it seems that the Icelandic Red Cross and the social services could cooperate on numerous tasks already assigned to the Red Cross.

The skills and knowledge of social workers and the social services have not been fully utilized in disaster management in Iceland and do not have specific legislative role within the civil protection system, except when it comes to psychological support. Including the social services in exercises and other work in connection with disaster preparedness and management might however change that fact.
There are presumably many aspects of this case which would need further attention and it is possible that those with more extensive training and knowledge within the civil protection system would predict a different outcome or procedures. There will always be new disasters and having more people prepared to deal with them should be a goal for governments worldwide. In Iceland, social workers get basic training in disaster management during their studies and could therefore be an excellent choice should local authorities decide to add resources to the field of disaster management.
References


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