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# MASTER'S THESIS

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**Abstract**

Nature-based tourism is experiencing a rapid growth in Norway accompanied by the change of tourists' interests from being passive spectators to active experiences. All this gives some new challenges to the Norwegian tourism business, risk communication being one of them. Providing good and accurate information to tourists so that they can get enjoyable experiences and come back safely is the responsibility of tourism business. Based on qualitative interviews this study identifies the main factors that have impact on successful risk communication process, as well as explores the strategic approach to risk communication to be implemented in the nature-based tourism. Though risk information and communication about safe and good experiences are available at destination companies' web-sites, this information is not always followed by the visitors so new forms of risk communication are under development. Conclusion is drawn to the necessity of integrating safety aspects and risk communication into the strategy of the whole tourism business for the business to be really sustainable and create high-quality experiences.

*Key words:* Risk communication; Safe experiences; Strategic approach, Sustainability.

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**Foreword**

The Norwegian tourism is currently experiencing a significant growth of visitors that is expected to increase in the coming decade. At the same time tourists coming to Norway have changed from being passive spectators of the beautiful nature to active consumers of experiences ranging from simple hiking to base jumping. All these changes provide excellent opportunities for the development of nature-based tourism in Norway and also present some new challenges to the Norwegian tourism business, risk communication being one of them. However, they also threaten the Norwegian outdoor traditions (Pettersen & Christensen, 2017). The increasing number of visitors to iconic destinations in the Norwegian mountains is also accompanied by the explosive number of rescue operations at Pulpit Rock, Kjerag and Trolltunga - the three natural magnets in the southwest of Norway. The lessons learned from many rescue missions that took place last summer were followed by a debate on excursion to Trolltunga and Preikestolen should be risk adjusted (Øyri, 2016).

# 1. Introduction/problem statement

## 1.1.    Problem statement

The phenomenon addressed in the study refers to conceptualizing risk communication as part of organizational communication, risk governance and its linkage to strategic management function in the nature-based tourism business. With greater attention focusing on a safety issues in nature-based tourism the study will contribute to deeper understanding of factors that influence the effective and proactive risk communication in this field. The task of communicating risks associated with nature-based tourism is found to be increasingly complex due to the lack of understanding between the sender of the risk message (tourist/destination companies) and the receiver (the public). It is caused by different factors and among them poor risk communication that leads to ineffective intervention in tourists' concern and behavior. Very often the lack of correlation is observed between the assessment of risks conveyed by the tourist organizations and tourists' risk perception and response behavior.

An increased focus on risk communication and risk communication strategy in natured-based tourism is acute due to the exceedingly growing number of tourists visiting such iconic destinations as Preikestolen, Trolltunga and Kjerag. Thus, the number of visitors to Trolltunga has increased from 500 to 40,000 between 2009 and 2014. The number of visitors to Preikestolen has increased to 300,000 and will be doubled in the next five years. However, most of the visitors experience the lack of knowledge on challenges of hiking in the Norwegian nature and terrain, possible risks and ignore the preventive warnings to meet their consequences. In addition, they are not aware of the relevant legislation. All this allows to draw attention to the question of safety experiences of tourists and who bears the responsibility for it.

The general principle of risk regulation in the Norwegian community is based on preventive measures with no limitations or prohibitions related to outdoor life. Tourists choose

tours by themselves on a voluntary basis, as well as make risk assessment associated with tours. The only regulating framework for the people to assess their own risk is the Mountain code that regulates the behavior of tourists in the mountain tours and helps them to stay safe ("The Mountain Code," 2016).

For example, according to the debates, tourists escape in nature by undertaking base jumping and experiencing individual freedom to expose themselves to danger associated with it. However, their risk is mixed with expectation that someone other will take responsibility for safety if they fail to cope with the situation. This mix of voluntary risk and expectation that someone else is responsible for one's safety proves the necessity of proactive risk communication on the part of the tourist community in Norway.

**1.2.    Objective and problem statement**

Risk communication is recognized in a social science perspective as much more than simple information on risk assessment (Aven, 2010). Risk communication refers to the external organizational/corporative communication representing one of the central principals of organization's strategic communication with its environments (Renn, 2008). The core of any successful activity in relation to assessing and managing risks is made by effective communication having a great impact on reputation management (Van Riel & Fombrun, 2007). It is through communication that organization gets access to resources needed to operate and build up its legitimacy and reputation as stressed by Van Riel et al. (2007).

This thesis focuses on risk communication practices in natured-based tourism business with an overall purpose to gain a deeper understanding of interacting factors that successfully contribute to practices.  The first research question will identify the basic principles of risk communication implemented by nature-based tourism business in Rogaland and could be stated as follows:

*Research question 1:* What factors contribute to successful risk communication practices in nature-based tourism?

It is highlighted in the research that public relations entered by risk communication should be conceptualized as a strategic management function and not as function of messaging, publicity and media relations in order to change attitudes and response behavior of individuals (Grunig, 2006).  It justifies to refer the second research question intended in the theses to strategical issues best suited for risk communication practices and explore the strategic approach to risk communication in the tourism business.

A clear strategy for planning and conducting communication activities should be developed and implemented by the tourism business as a response to risks in nature-based tourism (Tinker, Collins, King, & Hoover, 2000). This strategy foresees risk communication as a prerequisite of close cooperation between different stakeholders responsible for risk management activities (Kuenzi & McNeely, 2008). Thus, the second research question will allow to see how the risk communication enters the strategical management level and could be formulated in the following way:

*Research question 2:* What is the strategic approach to risk communication pursued by tourist companies?

Thesis statement: "Risk Communication in Nature-based Tourism".

## 1.3.    Thesis structure

The thesis starts with a review of challenges to risk communication and legal basis for the thesis laid by State Communication Policy and Principles of Communication that affect the practice and strategy of risk communication in nature-based tourism. It is followed by theoretical review presenting relevant theories and previous research on the topic of investigation. The inductive conceptual model is presented based on the theoretical perspective.

The methodology section refers to method and procedures applied for carrying out this study. Finally, findings on factors that determine success of risk communication practices and strategic approach employed by the companies based on interviews are explained and discussed. The main findings will be discussed in line with theoretical perspective and empirical evidence, thus forming the basis for meeting the overall objective of the study, followed by conclusive thoughts and recommendations.

## 1.4.    Challenges of risk communication

Risk communication was defined in Report on Improving Risk Communication prepared by the US National Research Council as "…an interactive process of exchange of information and opinion among individuals, groups and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risk, that express concerns, opinions or reactions to risk messages or to legal and institutional arrangements for risk management" (US National Research Council, 1989, p.21).

Risk communication in nature-based tourism is closely connected with safety and meets several challenges. One of the local challenges refers to the Norwegian legal framework - Outdoor Recreation Act, that safeguards the public right to get access to and go through uncultivated land in the countryside (Friluftsloven, 1957). This act also presupposes an individual's assessment of risk and behavior in the wild nature, individual responsibility for safety in nature-based tourism.

The only legal tool that safeguards individual's or public safety is the Police Law, section 7 (Politiloven, 1995). This legal act allows to intervene and prevent people from taking a hike by regulating traffic or imposing ban on settling in certain areas, for example, when the police closed the road and trail to the Pulpit Rock last summer. Here, the challenge is associated with trade-off between individual and public responsibility: police performing regulatory

control of tourists, thus making a breach in the freedom and risk self-assessment granted by the Outdoor Recreation Act.

Risk communication is understood as an intentional transfer of risk information (Renn, 2008). As one of the challenges we can name the message content to be understood by the receivers of the message for increasing their knowledge about the risk. However, the use of professional terminology might result in difficulties in understanding the message or misunderstanding. To sum up, the focus on the language and content of the risk information message is an important strategic issue (Renn, 2008).

Another challenge in risk communication is associated with building trustful relationship, improving public trust and credibility to institutions who assess and manage risk. One more challenge refers to situations where several affected groups are involved in communication that require effective coordination. It is also relevant for risk communication with groups of tourists largely consisting of people with different backgrounds in terms of language, culture and nationality (Renn, 2008); it cannot be expected that all of them perceive warnings from a Norwegian context and are acquainted with Mountain Code, regulating the behavior in the mountains in Norway.

As it was often stressed in mass media Mountain code is not exported while marketing Norwegian mountains abroad ("The Mountain Code," 2016). In addition, with extensive promotion of the Norwegian nature by the authorities, no adequate safety and emergency measures are undertaken to ensure relatively safe tourism as stated in the debates (Bø, 2016).

Poor understanding of risks and risks assessment by the lay people refers to other factors that seriously hamper effective risk communication, as well as lack of professionalism on the part of risk analysts who have no proper scientific base for risk and risk assessment tools (Veland & Aven, 2013).

Good communication is essential to convey information effectively. Currently there are great opportunities for communicating the information quickly based on the modern technical means. However, finding the relevant information, distinguishing the important information from less important and true from false and disseminate is challengeable as well.

To sum up, the sources of risk communication, creating and transmitting message for tourists taking into account these challenges should be important for the development of strategic approach to risk communication in nature-tourism.

## 1.5. Risk communication in Norway

The purpose of this sub-chapter is to present the communication policy introduced by the government that could be applied by tourist companies in developing risk communication policy.

### 1.5.1. State communication policy

The basis for the state risk communication is laid by Central Government Communication Policy established by the Ministry of Government Administration and Reform on 16 October 2009 (Ministry of Government Administration and Reform, 2009). The communication policy lays the basis for creating local planning and framework and is intended to fit all kinds of communication between municipalities and citizens as well as independent enterprises. The communication policy has a threefold goal: citizens should get correct and clear information about their rights, responsibilities and opportunities, have access to information about government's activities, and should be invited to participate in the formulation of policies, arrangements and services (Ministry of Government Administration and Reform, 2009).

To reach these objectives it is necessary to know about the people, their needs, conditions and views, use a clear language understandable to everyone, new technologies and new channels for communicating risk to affect risk perception and behavior response.

### 1.5.2. Principles of good communication

The Government Communication Policy outlines several principles of good communication that can be viewed as relevant for risk communication in the tourism industry: openness, participation, reaching all, active, coherency (Ministry of Government Administration and Reform, 2009). Principle of openness implies that organizations should be clear, open and easily understandable in its communication, contributing in the given study to two-way communication of risks in nature-based tourism business and influencing risk perception and response behavior.

The second principle, participation, is realized through involvement of people in formulating policies and taking their advices into account. This principle is implemented through participation in debates on safety in nature-based tourism with risk communication as an important part of safety measures.

The principle of reaching all refers to efficient dissemination of risk information to the target group, its adaptation and communication. In nature-based tourism it is realized by taking into account the cultural differences within the target group in risk communication practice meaning that the strategy of risk communication should foresee different cultural and social groups when making relevant risk information available, undertaking preventive measures and related activities. This principle could be also implemented through involvement of experienced tourists in sharing risk information. In addition, this principle may reinforce risk perception of tourists.

The last principle of coherency means that communication should be complete and contain major information from the relevant parties for coordination of communication with other stakeholders to build up comprehensive information (Ministry of Government Administration and Reform, 2009). This principle seems relevant for the tourism business as well, but it might be challenging due to the limited time period of the visit or quick changes of weather. However, it could be easily integrated in planning ways and channels for risk information dissemination based on the strategy of risk communication.

## 2. Theoretical review

This chapter presents a theoretical framework for the studied phenomenon including both former research and existing knowledge in risk communication. Firstly, the history of risk communication research is described, secondly the definition of risk communication is provided and its role in the process of risk governance, then the concept of risk communication and theories related to it are explained and how they are used in this study. Thirdly, the factors that are important for the success of risk communication are presented based on theories along with findings from previous studies in order to identify these factors. Finally, the chapter brings out a strategic approach to risk communication relevant for effective risk communication.

### 2.1 Risk communication research development

The field of risk communication is relatively new starting in the early 1980s. The research in the field is carried out as an essential part of risk management and risk governance (Aven, 2010) and went through the following development. Initially it was developed for investigating how expert assessment could be communicated to public to bridge the public perception and expert judgement by educating the public about risks (Renn, 2008). Then this purpose was modified as it was discovered by risk communication experts that most of the public refused to become "educated" by experts, moreover they are likely to choose alternative positions and practices of risk management (Plough & Krimsky, 1987).

With the evolution of risk communication field the views on what risk communication should contain and how it should be practiced have changed. According to William Leiss, three phases are identified in the development of risk communication practices (Leiss, 1996, p. 86). The first phase extends from 1975 to 1984 when risk communication was strongly influenced by detailed calculations of risk perception made by technical experts who communicated risk through technical definitions and numbers. Risk comparisons was the most prominent instrument of risk communication in this phase. However, such approach failed to convince the

public and resulted in decrease of understanding of message and weakened confidence in the institutions, represented by the technical experts.

The next stage of risk communication was initiated in 1980s (Siegrist, Earle, & Gutscher, 2012) aiming to fill the gap of confusion between experts and people. This phase emphasized persuasion and focused on public relations, successful communication (Leiss, 1996, p. 86). Here, key communication principles were transferred from marketing to risk communication. At this phase risk communicators tried to convince people through one-way communication process that their behavior is unacceptable due to high risk levels. Factors that influenced the success of communication included trust to the source, well-crafted message, effective use of channels and what is perceived as important by public (Leiss, 1996, p. 86). This communication process produced low effect on the public as it failed to create trust essential in successful persuasive communication because of too much focus on technical terms causing alienation and confusion among the public (Leiss, 1996, p. 86).

In 1995 risk communication stepped in a third and current phase with increased attention to social contexts related to public responses to risk information. This phase emphasizes is a two-way communication process with a focus on social context foreseeing social interactions between different actors in risk communication (Leiss, 1996, p. 86). In phase three it is recognized that existing lack of trust presents a problem (Leiss, 1996, p. 86). Efforts of risk managers here are aimed at overcoming this problem by building up mutual trust and responding to public and relevant stakeholders' concerns. Good practices are required to create mutual trust and effective risk communication in order to assist stakeholders to make a balanced judgement about the matters of concern (Breakwell, 2014; Hance, Chess, & Sandman, 1988). The research on risk communication within this phase refers to such studies as social trust, the social amplification of risk framework, and the affect heuristic.

## 2.2  Risk communication

The notion of risk communication is closely related both to risk governance and communication theories. In risk governance, it is understood as the ability of risk governance institutions to cope with complex consequences and implications of risks.

A process model of risk governance, a risk handling chain, was suggested in 2005 by the International Risk Governance Council (IRGC) both for scientists and practitioners (Renn, 2005, 2008; Renn & Walker, 2008). The framework's risk process, or risk handling chain (adapted from IRGC 2005) presented and explained by Renn and Klinke (2015) is illustrated in Fig. 1.
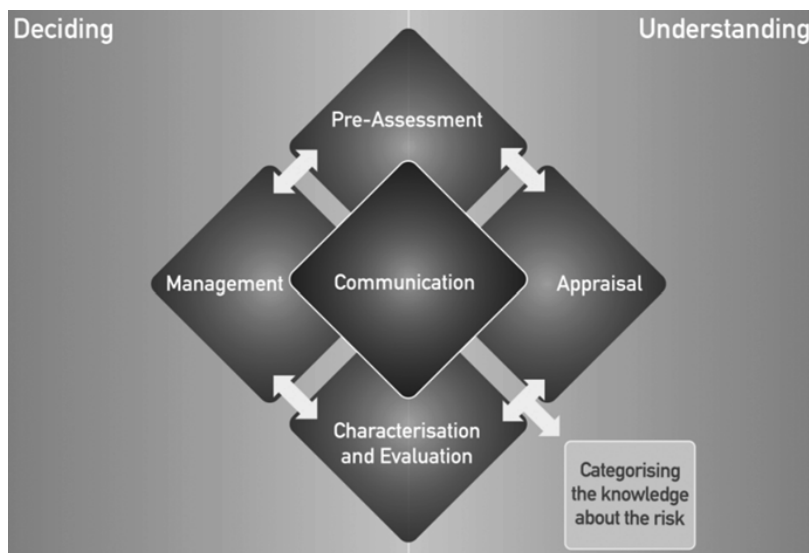


FIGURE 1 THE RISK GOVERNANCE FRAMEWORK

The framework presents the risk governance process consisting of four phases: pre-assessment, appraisal, characterization and evaluation, and risk management with communication being essential for all four phases addressing and handlings risks and having a cyclic nature itself (Renn & Klinke, 2015).

Risk communication in the model acts as a major important element going through the entire risk handling process and is used as a two-way sense within the context of risk

governance.  It assists stakeholders and civil society both to understand the rationale of results and decisions from the risk appraisal and management phases when they are not formally involved in the risk-related process, and to make informed choices about risk bridging factual knowledge about risk with personal interests and concerns, when they are involved in the decision-making process. To sum up, it is risk communication that creates flexibility for conflicting standpoints and lays the basis for their resolution, and also contributes to trust creation on the part of risk governance institutions for assessing and managing risk and related aspects. In the long run risk communication will affect the preparedness of the society to manage risks and react to crises and disasters (Renn, 2005).

Effective mutual communication is one of the key challenges in risk governance, playing the central role in the whole process and not being a separate stage (as it is often understood). It acts as the core of any successful risk governance activity, whereas lack of communication destroys risk governance (Renn, 2005)

Risk communication is understood as the process of communication related to assessment and management of risks. Several researchers have attempted to provide an explicit definition of risk communication. The definition provided by Vincent Covello et al. (1988) is perceived as the dominant one. Risk communication is considered as "any purposeful exchange of scientific information between interested parties regarding health or environmental risks; or decisions, actions or policies aimed at managing and controlling such risks" (Covello, Sandman, & Slovic, 1988, p. 112).  According to Covello et al. (1988), four areas are distinguished within risk communication: informing and education, stimulating behavioral change and taking protective measures, issuing of disaster warnings and emergency information and exchange of information and a common approach to risk issues.  The strength of this definition lies with exchange of information understood as a two-way communication process characteristic for the current phase of risk communication.

The term of risk communication was also addressed in terms of educating and persuading the public (Fischhoff, 1995). Leiss (1996) defines risk communication as "the flow of information and risk evaluations … between academic experts, regulatory practitioners, interest groups, and the general public" (Leiss, 1996, p. 86). This definition covers all dialogues within risk communication flow, information on risk itself and risk assessment and how to deal with it.

Another definition refers to risk communication as providing laypeople with the information that will enable them to make independent judgements about risks to health, safety and the environment (Morgan, 2002). Here, risk is perceived as a source of information underlying decision-making process. However, the last definition doesn't reflect a two-way communication process as previous definitions do.

Based on the development of the notion, risk communication is currently referred to as meaningful interactions in which knowledge, experiences, interpretations, concerns, and perspectives are exchanged (Lofstedt, 2003).

To sum up, all the definitions have one thing in common - they are all based on communication between interested parties and serve sharing the information about risks and possible ways of handling them, providing a basis for risk-related decisions and risk management measures, also contribute to building and supporting trust among various actors.

Besides risk governance theory, certain communication theories are also applicable to risk communication and contribute to understanding of risk communication processes. Communication theories and concepts from social psychology in relation to messages effecting attitude and behavior are relevant to understanding how people perceive and process information about risks (Gutteling & Wiegman, 1996). It is worth mentioning two cognitive

communication theories (such as the elaboration likelihood model and the heuristic theory) and fear arousal framework in the context of successful communication.

The elaboration likelihood model (Petty & Cacioppo, 1986) is developed under the influence of cognitive response theory, according to which, the effect of communication is determined by cognitive processing of information based on individual's ideas, thoughts and attitudes that interfere with or accept the arguments of the message.   The central notion of the theory is that recipients employ cognitive efforts to process the content of persuasive messages.

On the contrary, according to heuristic theory, individuals may process information heuristically but not necessary systematically.  Here little cognitive effort is applied as simple decision rules developed based on previous experiences are employed in heuristic processing. As a result, judgements might be based on superficial aspects of the message, such as number of arguments, emotional setting, length of the message (Gutteling & Wiegman, 1996).   Both communication theories are relevant to risk communication as they explain why either arguments in the risk messages influence their receivers or the context of risk communication.

Another communication model, the fear arousal model, conceptualizes fear arousal as an individual reaction to a fear-arousing message resulting in adaptive responses. The major assumption of this model is that the relation between fear arousal and message acceptance assumes no attitude change at low or high level of fear arousal. Mostly the attitude change is observed at the average level of fear arousal, whereas a high fear level results in a high level of aversion (Janis, 1967).  The major assumption in this model refers to the increase of fear level accompanied by increase of the level of accepting recommendations in the message (Sutton, 1982).

All the communication theories mentioned above are important in understanding how to shape risk perception by risk information messages and influence altitudinal and behavioral responses to be applied in conducting empirical risk perception research.

Finally, it seems important to draw a clear distinction between risk communication and crisis communication though both represent forms of communication. If risk communication is defined as the exchange information about risk to health caused by environmental, natural, technological, agricultural or industrial processes, products or policies, the crisis communication has a more limited concept meaning an exchange of risk-relevant and safety information in the emergency situation (Glik, 2007). The most obvious difference between these forms of communication relates to their occurrence in the timeline: if risk communication refers to preventing forthcoming or probable threats before a potential incident/crisis takes place, crisis communication aims at avoiding or mitigating the impact of the dangerous event and people's rehabilitation (Sellnow, Ulmer, Seeger, & Littlefield, 2008).  With regards to nature-based tourism, the principal rationale for risk communication is to initiate and implement preventive risk management efforts resulting in avoiding or mitigating risk situations, thus contributing to both tourists' safety and their good experiences.

Effective risk communication depends considerably on how well people are prepared to face and handle the risk. Renn (2008) outlined the major functions of conducting risk communication that comprise education and enlightenment, training on risk management and encouragement of changes in behavior, establishing trust to the institutions handling risk and, finally, involvement in risk-related decisions and conflict resolutions (Renn, 2008). According to Renn (2008), enlightenment deals with informing the public about risks and how to handle them, whereas risk training assists people to cope with potential risks and disasters. The third function refers to creation of trust in risk governance institutions able to assess and handle risks

and the last function concerns the involvement of the public in the decision-making process on risk assessment and management.

## 2.3  Factors influencing risk communication

This sub-chapter outlines various interrelated factors associated with the functions mentioned above that are important for the success of risk communication.

### 2.3.1 Promotion of risk communication

This sub-chapter describes how to communicate risk to avoid unexpected occurrences and mitigate irrational behavior in nature-based tourism. To be successful risk communication should address public expectations and public knowledge about the risk concerned. It implies that communicator should listen to public concerns and demonstrate that they are recognized and responded (Renn, 1998). Both sides, risk communicators and public, can learn for each other through two-way communication process as a factor of successful risk communication (Renn, 2008).   Two-way communication contributes to a better performance of all risk managing institutions and requires flexibility, careful management and willingness of addressing public expectations, recognition of public concerns and continuous effort to communicate (Renn, 2008). In their turn, all these conditions ensure trustworthiness and competence of risk management institutions.

Two-way communication has different forms but all of them are characterized by the direct contact of risk communicator with the target audience when both sides experience interchangeable roles of an active listener and responsive presenter (Renn, 2008). To achieve the successful communication experts and public should listen to each other trying to reducing the disparities between risks assessed by experts on the one hand and risks as understood by the public on the other (Leiss, 1996, p. 86).

The main barriers to successful risk communication refer to non-professional work of risk analysts and not to poor understanding of risks by the public (Veland & Aven, 2013). The challenge of risk communication is to improve the quality of a dialogue about risks between experts and public and reduce the gap separating them (Leiss, 1996, p. 86). Based on the improved dialogue it is possible to reach a higher degree of agreement on controversial issues of risk management by connecting the knowledge on risk management and assessment with communication research (Leiss, 1996, p. 86). It allows both parties to understand the meaning of risk evaluation in a similar way and a concerned party to make a wise and correct decision to protect themselves from risk (Renn, 2008). Including the public will affect understanding the decision and making the public accept it. According to Arvai (2003) even those who don't take part in risk debates accept the risk-related decisions because they are made aware through risk communication that all parties concerned are heard under the decision-making process and taken into consideration (Arvai, 2003).

Besides two-way communication, there exist other forms that are recurrently applied for promotion of risk communication. Among these forms we can mention brochures and leaflets providing risk information to different audiences on a large-scale basis as well as multimedia presentations (Renn, 2008).

Mass media is another area relevant for the risk communication, being a source of great impact on how the public reacts to risk (McComas, 2006). However, mass media has impact on the social level and doesn't deal with personal risk assessment. Through mass media people feel risk as belonging to the group but not taking responsibility, which is well proved by Morton and Duck (2001) demonstrating the effect of mass communication on human perception, that is more obvious in perception of others than in perception at a personal level. Here people perceive others to be more vulnerable than themselves, whereas personal risk perceptions is more associated with interpersonal communication (Morton & Duck, 2001). However,

according to the media system dependency theory, the relationship between mass communication and beliefs is rather complicated. The impact of mass communication on both personal and impersonal perceptions is associated with the theory of self-reported dependency on mass mediated information. Both mass and interpersonal communication are interdependent as sources of influence on a social level while dependency on media risk communication is important in shaping impact on risk perception (Morton & Duck, 2001).

**2.3.2 Formation of risk communication message**

Conveying and understanding risk information is understood as an important element in risk communication.   Conveying information in form of messages is based on the communication model of information transfer from a sender to a recipient.

However, such exchange of information is often hindered by special terminology applied that cause difficulty in understanding or interpretation of the messages by the public (Jardine & Hrudey, 1997). The terms used by risk managers with different "technical" and "colloquial" meanings create the so-called "mixed messages" resulting in confusion and misinterpretation by the public according to Jardine & Hrudey (1997).

In addition to "mixed messages", the information provided by risk practitioners is too accurate and overloaded with details that also complicates its understanding by the public. Therefore, it is important to formulate a message to be interpreted by recipient similar to the way it is conveyed from transmitter. Thus, a common language for all parties should be created for the public to understand the messages (Aven, 2010). Furthermore, the experts should be familiar with the public and their needs in order to develop a common language shaping the receiver's understanding of risk messages.

While designing effective risk communication messages Renn (2008) recommends to apply a number of general guidelines that assist risk communicators in getting the maximum

influence by their messages regardless of audience or risk type (Renn, 2008).  According to the first rule the communicator should be clear on his intentions to be reflected in the central message to be stated in the beginning complemented by additional information later. Clarity and unambiguity are named as two main conditions for risk communication message to grasp the attention of the corresponding audience by other researchers (Breakwell, 2014).

The next rule refers to the necessity for the communicator to simplify the content of risk communication message as much as possible (Renn, 2008). It will create unambiguous understanding and interpretation of the message by the receivers. The communicators should never assume that the audience possesses technical knowledge and avoid using technical terms and concepts in the message.

Structuring of information and placing the basic information in the beginning of the message followed by more complicated information in the end is the fourth rule (Renn, 2008).

For shaping effective risk messages and communication programs and grasping the recipients' attention it is essential to predict their interests. This rule is important for meeting the public needs as the public wants to know certain common things: risk consequences, occurrence circumstances, risk mitigation possibilities and efforts of risk institutions and have no wish to become an expert in various scientific areas  (Renn, 2008).

The effective risk communication depends on the content of risk communication that in its turn relies on risk circumstances, its level and risk nature (Renn, 2008). According to Renn (2008), risk communication should be tailored to each specific incident but at the same time have some common aspects to be included in risk communication message. One of the aspects refers to making a statement of commitment in order to ensure a communication flow. The statement should include the information on public concerns about the case (Renn, 2008). A clear distinction between the risk types (with possible outcomes) and likelihood of the outcomes

occurrence should be made. The serious risk-related outcomes should be acknowledged with expressed concern. In addition, the information about risk exposure and probability of "sensitive" groups of populations (e.g. children) to be affected should be pointed out. The knowledge base should be outlined together with its development trends and people responsible for it. One more common aspect refers to the probability estimates made both with numbers and words. It is also important to formulate the acceptable risk level for the specific case and justify the responsive action chosen based on decision making.  Any type of risk communication should cover the information about how the possible victims can protect themselves against the potential or known risk (Renn, 2008).

### 2.3.3 Risk perception

Successful risk communication is determined by risk perception patterns to be taken into consideration by communicators. Risk perception has been the focus in risk communication research during the last ten years (McComas, 2006). According to McComas (2006), people assess risk and base their risk judgements both on what they think about the risk and how they feel about it.  It was found out that not all the messages warning of dangers to public health and safety and suggesting safer actions achieve their intended effects as many of them fail to get any public response (McComas, 2006).

The positive feelings regarding the activity make people assess the risk lower than when they have negative feelings on the activity and vice versa. This approach termed as affect heuristic by Slovic and his colleagues (2004) results in that a person can make a decision based on feelings but not on what is considered to be the most reasonable (McComas, 2006) . Thus, decision of young people to start smoking is driven more by feelings than risk perceptions (Romer & Jamieson, 2001), as they perceive smoking as something new and exciting but not dangerous, (Slovic, Finucane, Peters, & MacGregor, 2004). The same concerns the nature-based tourism, where risk is perceived as an adventure in which the participants seek fear and

thrill that results in inappropriate risk estimation (Cater, 2006). The hypothesis on risk-as-feelings suggested by  Loewenstein and colleagues (2001) explains the difference in risk responses depending on gender and age as well what has strong impact on reaction to risk (Loewenstein, Weber, Hsee, & Welch, 2001).

Risk communication considering risk perception research makes it possible to adapt risk communication strategy based on public's response to risk (Otway & Wynne, 1989). Moreover, it was found out that risk is perceived differently by normal people and experts. People perceive risk depending on how their life will be affected and this is understood as an important issue in development of risk communication strategy (Otway & Wynne, 1989).

Furthermore,  risk estimates provided by experts fail to influence the people's behavior and responses similarly to their risk perceptions (Frewer, 2004).  So, risk communication must take account of the actual concerns of the public specific to a certain hazard, for instance, probable negative environmental impact, effect on human health or vulnerable groups of the population. According to Frewer (2004), the public prefers a clear message on risks and associated uncertainties. However, societal priorities related to risk mitigation activities may fail to be in line with those identified by experts. The conclusion is drawn that awareness and understanding of public perception and concerns should lay the basis for effective communication strategy while dismissing them may result in the increased distrust and loss of public confidence  (Frewer, 2004).

One more approach, particularly important for risk perception, is represented by intuitive heuristics which is based on common sense mechanisms (Kahneman & Tversky, 1979), helping to process information and assisting receiver to draw conclusions. These processes are associated with mechanisms of processing probabilistic information. For example, the use of mini-max rule for making decisions implies the attempt to minimize post-decision regret by choosing the option with the least dangerous potential regardless of its

probability. It reflects the intuitive strategy to be applied when evaluating risks that cannot be perceived with human senses and depend on the information provided by communicators.

The research devoted to the relationship between risk perception and preparedness for actions reveal that primary factors that shape individual risk perception in natural hazards refer to the experience of a natural hazard and trust or lack of trust to experts and authorities (Wachinger, Renn, Begg, & Kuhlicke, 2013). Thus, experience and trust act as primary predictors, whereas cultural and individual factors including media coverage, age, gender, education, income, social status and others play the role of modifiers or amplifiers (Wachinger et al., 2013). However, according to Wachinger et al (2013) the relations between risk perception and behavioral responses turn to be controversial. In addition to the assumption that high risk perception results in protective actions, this relationship is dependent on contextual factors, among them individual's ability to recall past damages or imagine the hazard's effect, trust to public authorities (Wachinger et al., 2013). All these factors should be taken into account for achieving the best risk communication practice in nature-based tourism.

The theory of social amplification of risk introduced by Roger Kasperson (1988) helps to understand what shapes risk perceptions by linking expert's interpretation of risk with psychological, sociological and cultural processes of individual's risk perception and behavior patterns associated with risk (Kasperson et al., 1988). Here the social identity of individual is partially associated with groups one feels most attached to (Dawnay & Shah, 2005). The theory is based on the assumption that risk perception increases or reduces reaction to risk depending on individual perception. Thus, risk is amplified through personal perception, social amplification comprising risk experts' assessment, mass media, cultural groups, interpersonal networks, etc. and results in behavioral responses. The responses bring forward in their turn secondary consequences including liability, insurance costs, loss of trust to institutions. The

strength of the model is in its explanatory power, so it was suggested for the risk managers to use it for better anticipating and responding to risk assessment differences (Leiss, 1996, p. 86).

In addition, risk perceptions are shaped by "place" attachments with place as an important aspect in social amplification or attenuations of risks (Masuda & Garvin, 2006). In the study with nature-based tourism the amplification and attenuation of risk perception will be mostly influenced by such factors as cultural background, gender, age, socio-economic status, whereas spatial attachments seem not to be so relevant.

### 2.3.4 Trust

The scientific research has demonstrated that risk communication and trust represent interrelated processes. If communication fails it may damage trust, while on the other hand, if communication strategies fail to assess the context in the right way (its trust level and reasons for) may increase distrust  as well (Löfstedt, 2005).

Trust in risk management is understood as a process where individuals choose to rely on risk management institutions (McComas, 2006) and has a strong impact on risk perception (Wachinger et al., 2013). The importance of trust has increased due to the to the development of complex technologies resulting in replacement of individual risk experience by risk information and personal control over risk by institutional risk management (Aven, 2010). Establishing trust and confidence in risk governance institutions able to handle and assess risks is understood as the most important objective in successful risk communication as well as a prerequisites for many other objectives (Aven, 2010).

Researchers distinguish between the terms trust and confidence though they are often used interchangeably. The former is defined as the willingness in expectation of beneficial outcomes (Earle, Siegrist, & Gutscher, 2010) and is based on social relations, group membership and shared values, whereas the latter, confidence, is a more lasting experience of

truthfulness over time (Renn, 2008). Confidence is based on the belief formed as a result of experience that certain future events will occur as expected (Earle et al., 2010). In short, confidence is built upon the experience of trust, meaning that people get confidence in institutions if their initial trust in them turned not to be disappointing over time.

Building trust should be developed before risk situation occurs and enter the integrated communication plan for enterprise/government (Henry, 2000). There is no simple recipe for achieving trust with a general rule for building trust by listening to people's concerns, and getting involved in responsive communication (Aven, 2010). It is impossible to build trust and maintain with information alone representing a one-way process. Two-way communication based on systematic feedback and a dialogue are prerequisites for trust development (Morgan, 2002). Participation of all the parties concerned will provide a better opportunity to create a common understanding of what risk is and how people should react to risk assessment and recommendations. Including relevant actors in the process of risk communication will contribute to building trust and help in avoiding misinformation conveyed to one of the parties (Cherrie, Howie, & Semple, 2011).

Trust to public authorities, risk governance experts and institutions, acts as a one of the primary predictors of risk perception in addition to personal experience (Wachinger et al., 2013). Individuals use trust for personal risk management when they fail to assess all the threats by themselves thus being forced to trust in authorities and experts and select experts whose opinion they consider to be trustworthy (Siegrist & Cvetkovich, 2000). It results in reduction of uncertainty; however, individuals might feel more at risk if they lack trust in experts or their trust is damaged. It demonstrates that people's responses to risk are dependent on the confidence they have in risk governance institutions (Slovic et al., 2004).

It is evident that trust has an important impact on risk perception and behavioral response, however, relationship between them is rather complicated and controversial in

relation to preparedness to action (Wachinger et al., 2013). On the one side, high risk perception will lead to a more serious response of individuals to warnings and preparatory actions, thus resulting in risk mitigation behavior, whereas on the other side, the risk perception decreased based on trust reduces individual's willingness and preparedness for actions (Wachinger et al., 2013). It could be explained by the fact that people believe that authorities and experts bear main responsibilities for protecting them from hazards. Another factor that influences trust is the previous experience of trust-building relationship that determines their willingness to act and their preparedness to actions. The person takes a decision to act based on his/her interpretation of the information derived from the previous experience (Wachinger et al., 2013).

### 2.3.5 Public

Tailoring the content of risk communication to the interests and concerns of the different social and cultural groups within a society is viewed as one of the major problems for the risk communication process (Aven, 2010). Anthropologists and cultural sociologists identified different groups in the society from each other according to cultural beliefs (Douglas & Wildavsky, 1982; Schwarz & Thompson, 1990; Thompson, Ellis, & AARON, 1990). These groups are characterized by specific attitudes and strategies in relation to risk issues.

To achieve effective risk communication in nature-based tourism the national differences influencing the perception of experiences should be taken into account as cultural dimensions proved to be effective in explaining cultural differences in perception (Taylor, Miracle, & Wilson, 1997). The risk communication messages should be customized depending on the groups of tourists they are aimed at, thus requiring different approaches for creating risk communication messages.

According to Aven (2010), it is recommended to have a classification of potential audience before developing strategies for risk communication and risk communication

programs. The provided classification considers two dimensions: the interest in the risk topic and arguments type that the audience may find attractive or offensive. Cultural dimensions, such as individualism or collectivism, may influence feelings and emotions aroused by taking part in activities in nature-based tourism (Hofstede, Hofstede, & Minkov, 2010) and ascribe possible differences in attitude and behavior. Difference assigned to other value dimensions, such as power distance, risk aversion and masculinity/femininity (Hofstede, 1980) can also attribute difference in culture (Vespestad, 2010). Other dimensions illustrating differences in culture refer to search for novelty and change, seeking risk (Cater, 2006) and sensation (Galloway, 2002). The information about the cultural classification contributes to understanding the risk perception and possible response of tourists to risk communication messages, as well as to creating messages that will ensure to grasp the interest and influence behavior intentions.

The knowledge of the public also allows to formulate risk communication messages in a way to avoid confusion or their misinterpretation on the part of tourists (Jardine & Hrudey, 1997).

### 2.3.6 Strategic approach to risk communication

As it was mentioned above risk perception is determined by personal attitudes, experiences and abilities. To change attitudes and response behavior of individuals, public relations (including risk communication) should be conceptualized as a strategic management function and not as function of messaging, publicity and media relations (Grunig, 2006).

Based on the scientific research risk communication is conceptualized as a systematic planning of information transfer with the aim of preventing, solving or mitigating the risk problem with the help of adjusted and customized risk messages for different target groups (Gutteling & Wiegman, 1996). According to Gutteling et al. (1996) risk communication is a

social process where different types of communication are applied based on circumstances and the planning process phase. The systematic planning approach comprises several steps starting from the perception of risk followed by the development of a communication strategy with plans to mitigate risk and role of communication discussed. The next phase of systematic planning is the design of communication plan with method of communication defined followed by pretesting of risk communication on a small scale to meet its objectives. The last step refers to full- scale implementation.

Such systematic approach represents a heuristic tool, a framework to develop risk communication and contributes to its success based on the activities planned within each planning phase and realized through developing risk communication strategy (Gutteling & Wiegman, 1996).

Tinker et al (2000) goes further and develops recommendations for design and implementation of risk communication strategies that comprise a clear strategy for planning and conducting communication activities, defining staff roles and responsibilities, developing clear and consistent messages, a dissemination strategy, and training in the delivery and assessment of messages, their impact and outcomes.

According to Kuenzi et al. (2008) the strategies in risk communication in nature-based tourism should be aimed at raising awareness of a risk issue and of the risk governance system that should be associated with travel experience and interests of the individual. Kuenzi et al (2008) highlights that risk communication as a prerequisite for the risk management actions, should be coordinated by different stakeholders who are aware of risks and risk governance actions based on their functions. Thus, risk communication in nature-based tourism should refer not only to tourists but to stakeholders making them share aspects relevant for managing risks, their concerns and strategies (Kuenzi & McNeely, 2008). At the same time, to realize necessary communication strategy in nature-based tourism is perceived as rather complicated as

responsibilities are spread amongst stakeholders with conflicting goals and interests (Kuenzi & McNeely, 2008).

To sum up, the research review is focused primarily on the interrelated factors that contribute to successful risk communication practices and secondary on strategic approach to risk communication as the basis of successful risk communication. As it is stressed by Kuenzi et al. (2008) risk communicators can exercise greater control in strategic risk communication and contribute to the ways of improving it.

## 2.4  Conceptual model

Based on the theoretical overview provided above it is obvious that there exist certain factors that influence the successful risk communication practices. These factors are reflected in the conceptual model (Figure 2). It is proposed that the success of communicating risk is influenced by such factors promotion of risk communication, risk communication message, risk perception, trust, public. These factors will lay the framework for the development of a research instrument to be discussed in the next section.
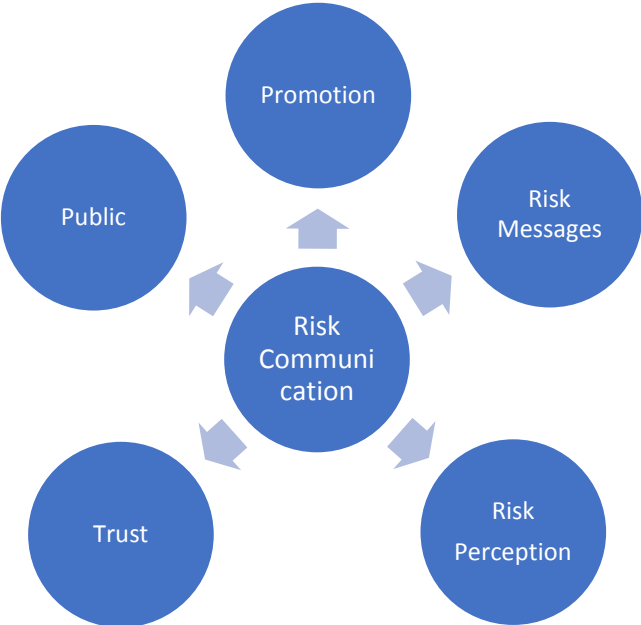
FIGURE 2 FACTORS INFLUENCING SUCCESSFUL RISK COMMUNICATION PRACTICE

## 3.  Method

This section provides an overview over methodological solutions and procedural steps undertaken for conducting the empirical study. In the following subsections, the chosen overall design will be justified together with discussion of a sample, data collection method and analysis. The reliability and validity as well as ethical and generalization issues will be described and discussed in the end. In addition, reflection on my own experience contributing to the study is provided.

### 3.1  Design

The qualitative research design is applied in the thesis and characterized by focusing on the research questions while collecting the data and becoming clear after the researcher gets deeply involved in the data (Neuman, 2011). The qualitative research orientation was chosen for this study as my intention was to go deeper in nuances of risk communication practices employed by nature-based tourism. In general, qualitative research is aimed at comprehending the unique interaction in a particular context, likewise to gain deeper understanding of specific characteristics of this context and the meaning attributed by the participants (Patton, 1990). Qualitative research allows to understand, describe and explain social phenomena by analyzing experiences related to individuals or groups,  by exploring interactions and communications as well as documents reflecting interactions or experiences (Steinar Kvale, 2008).  This approach makes it possible to explore individual's subjective experiences in detail by using a number of research methods (Hennink, Hutter, & Bailey, 2011). The qualitative research involves an interpretive, naturalistic approach to the world, meaning "that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2008).

The research design in the thesis is represented by a number of informants interviewed with a purpose to get deeply involved with each one. Qualitative studies differ from quantitative

studies in that data is recorded in the form of words and images from the documents, observations and not in the form of numbers (Neuman, 2011). The data in my study is recorded in the text format that corresponds to the qualitative research. The study benefits from this method as it implies fewer restrictions on the answers of informants making the research method more flexible in comparison with the quantitative one based on pre-defined answers. This flexibility makes it possible to refine the research questions, even change it based on new lines of evidence in the process of work. Moreover, it is reasonable and best appropriate to apply a qualitative approach aiming at clarifying a concept or phenomenon, or if one has the intention to promote a more detailed description of a topic (Jacobsen, 2005).

There is an advantage of using few informants in the research as it allows to have a closer contact with them after the main interview in case of follow-up questions. Going into details based on the interview with a research overview in a background allowed me to achieve a deeper insight in the topic under investigation in my study.

The research implemented in the thesis is based mostly on the inductive strategy characterized by moving from specific observations to broader generalizations and theories to specific observations, developing conceptual model to explore, and finally ending up with developing some general conclusions.

### 3.1.1 Researcher's reflexivity

The qualitative approach implies a certain degree of subjectivity both on the part of study participants who reflect their subjective views of the phenomenon under investigation and on the part of a researcher who contributes his subjective influence to the research process especially during data collection  and interpretation (Hennink et al., 2011). The interpretative approach employed in qualitative research recognizes the researcher's background and previous experience as an inherent part of the interpretation process. This is termed as reflexivity and

could be described as a process of conscious self-reflection on the part of researchers (Hennink et al., 2011). My current experience working at the Information Tourist Office in Stavanger has affected both my choice of the research topic and my approach to understanding issues under investigation, influenced or biased my questions and interpretations of the collected data, as I practice risk communication in every-day activities through personal communication with tourists. My cultural background might also have impact on interpretation of the data collected (referring to cultural differences, in particular) as I obviously referred to my background experiences.

## 3.2  Data collection and analysis

This chapter of the thesis is devoted to the description of data collection and methodical assessment of the data received. The description will be started with the methodical assessment applied for data analysis.

### 3.2.1 Interview

Qualitative in-depth personal interview is employed as a method of data collection for this study that involves discussion of specific topics in depth between interviewer and interviewee (Hennink et al., 2011). This technique of data collection is optimal for getting a first-hand information from those involved in risk communication on a regular basis. It also allows to achieve deeper understanding of the topic under investigation from the perspectives of research participants with experience in risk communication. In-depth interview is understood as knowledge-producing conversation and should not be confused with a dialogue (Hennink et al., 2011). In the process of the interview informants express their understanding and share their perspective, while the role of interviewer is to draw out their story and interpret their subjective experiences in the most efficient manner (Hennink et al., 2011). All interviews under this study are carried out face-to-face at the offices of informants that contributes to the easy and free-talk atmosphere.

Semi-structured interview guide is applied in the research as a tool in the in-depth interviews, representing a basic checklist of main issues to be investigated with each informant (Appendix 1). The interview guide was prepared also for making sure that the informants will cover the same topics based on similar questions. The semi-structured interview guide bears certain advantage in examining new topics raised by the participants due to its flexibility. Its flexibility manifests itself in the opportunity to adjust interview questions in the process of data collection and formulate additional spontaneous questions as responses to issues raised by the participants (Hennink et al., 2011).

The interview guide is developed according to the steps described by Hennink et al. (2011) and has the following structure: introduction, opening questions, key question and closing questions. Introductory points are aimed to remind interviewer about the purpose of the study, its outcomes, inform about the confidentiality of the participant and anonymity of the data collected, and seek for permission for audio-recording. Opening questions include questions about the interviewee and the organization. Here, topics in the interview guide are broadly referred to the research topic, but are not the key questions for the research study. Key questions are central in the interview guide designed to collect the core information to answer the research question (Patton, 1990). Some probes are used by the interviewers during this phase for exploring nuances and understanding the issues from the interviewees' perspective. The closing question is simply aimed at asking if the interviewees have anything further to add.

After conducting the pre-test interview, some small changes were introduced into the interview guide. Some questions were improved and reworded. In addition, some notes were taken for the coming interview. Each interview contributed to drawing inductive conclusions and going deeper in the topic. In the end of the interview the follow-up questions were asked that assisted in clarification of some unclear issues or topics that were not taken into consideration.

### 3.2.2 Selection of participants

The essential part of any research method refers to decisions on whom to be included in the study. In general, the process of selecting participants for the study comprises two steps: defining an appropriate study population and identifying strategies for selecting people from this population to participate in the research study (Hennink et al., 2011). However, the approach to selecting participants differs for qualitative and quantitative research. Quantitative study is characterized by the method of probability linked with randomly selected and statistically representative sample (Maxwell, 2012; Neuman, 2011; Patton, 1990). Here the random selection of participants is viewed as the gold standard for quantitative studies as the main goal is to generalize the findings of the research to the broader population from which the participants were selected (Hennink et al., 2011; Patton, 1990).

On the contrary, the method applied in qualitative studies for selecting participants differs from the method in quantitative research as the primary goal of qualitative research is to gain a deeper understanding of a phenomenon under study, its meanings and the context the phenomenon takes place (Hennink et al., 2011). This purpose requires a small number of participants for exploring issues in depth (Hennink et al., 2011). Moreover, this sampling strategy relates to participants chosen deliberately as they have particular characteristics or experiences and can provide valuable information for a detailed understanding of the phenomenon under investigation (Hennink et al., 2011). Therefore, qualitative research uses non-random methods of selecting participants, known as purposeful sampling (Maxwell, 2012; Patton, 1990). The purposeful sampling was chosen as a method for selection of participants for the given empirical study.

### 3.2.3 Study population

Hennink et al. (2011) recommends to clearly define study population before deciding on strategy for participant recruitment. A clear definition is needed to show who should be

recruited and how to carry out this process (Hennink et al., 2011). The target population for this study was chosen based on the studied phenomenon in the certain business sector, nature-based tourism. As Rogaland has two of the most famous iconic destinations in Norway, it was decided to choose the companies associated with nature-based tourism located in the Stavanger region. Moreover, based on the investigated phenomenon and understanding risk communication as one of the most relevant aspect of safety, it was decided to include a whole chain of companies into the population frame ranging from companies providing services in nature-based tourism (nature guides) to companies in charge of physical infrastructure development, transport, rescue and marketing services. The participants interviewed in this study work mainly with communication and marketing issues at their companies, but some of the informants are directly involved in the nature guide services. Such population frame reflects the necessity of cooperation of different stakeholders in nature-based tourism in order to achieve common strategy in risk communication (Kuenzi & McNeely, 2008) and create sustainability both in risk communication and the whole business.

Due to the anonymity of interviews, no names of informants or companies they represent were provided. However, with the aim to distinguish them from each other they are named in the study based on their field of work and referred to as Informant 1, 2, 3 etc.

The overview of informants is presented in Table 1.

| FIELD OF WORK | NAME |
|---|---|
| **Nature Guide** | Informant 1 |
| **Transportation** | Informant 2 |
| **Destination Marketing** | Informant 3 |
| **Nature Park** | Informant 4 |
| **Rescue operations** | Informant 5 |
| **Physical Infrastructure** | Informant 6 |
| **Trekking company** | Informant 7 |
| **Destination Marketing** | Informant 8 |

TABLE 1 OVERVIEW OF INFORMANTS

**3.2.4 Data collection**

A total of 8 interviews were taken for the study. The duration of each interview made approximately 45-60 minutes. The data received were transcribed and anonymized for further analysis. All recorded interviews were transferred into a verbal transcript and contained both the words of informants and the interviewer. The transcripts included also aspects of speech and pauses that were helpful in interpreting the meaning of what was said, and conveyed the attitudes. The interviews were conducted in English, so no translation was needed, though sometimes Norwegian words and expressions were used as well as the names of Norwegian legislative acts.

**3.2.5 Data analysis**

The qualitative data analysis is generally understood as inductive with categories and concepts, as well as relationships in the data established in the process of discovery (Hennink et al., 2011; Marshall & Rossman, 2014). At the same time, the process of categorization and analysis of the findings was influenced by theoretical framework, in which the study was

conducted. The stages of analysis applied in this study consisted of the following techniques identified by Patton (1990): data documentation during the data collection process, categorization of the data into concepts, identification and interpretation of related concepts.

The qualitative analysis is understood as an interactive process (Patton, 1990) with analysis starting at the stage of data collection. The field notes were frequently taken in the process of interviewing in order to register important statements and issues helpful in understanding the context. Transcriptions were made directly after the completion of each interview, followed by in-depth reading and interpretation of data and notes taken. Such strategy allowed to identify additional issues and categories to be explored in the next interviews by adding them to the interview guide. The next stage of the analysis dealt with organizing data into conceptual categories and themes (Hennink et al., 2011; Patton, 1990). According to Hennink et al. (2011) the process of generating categories implies taking notes of pattern that could be seen in the data setting and also expressed by participants. "Discovering patterns" represents inductive analysis as Patton (1990) puts it. Inductive codes were identified through reading the data. Such inductive codes as "promotion", "message formulation", "risk perception", "trust", "cultural differences" and "strategic approach" originated from the topics of the interview guide and data received, backed by the theoretical framework. As coding process implies identifying key patterns and categories for organizing the data it resulted into data reduction and new frameworks emerged. The following categories were identified: "risk communication practice", "forms of risk communication", "communication channels" and "strategy". The process was contributed by the development of inductive codes based on the issues raised by participants, including "personal authoritativeness", "sustainability", and "certification". Then all the codes were collected into one file that facilitated the process of looking through interviews and finding concepts. After that interpretation of data took place and linking it with the accepted theory and relevant scientific literature.

Finally, it is worth mentioning that the qualitative analysis is characterized by an interpretive approach, when a researcher tries to understand the phenomenon according to "participants' perspective" (Maxwell, 2012; Patton, 1990). So, more experienced researchers could interpret the data in this study differently that may influence the conclusions drawn.

## 3.3 Validity and reliability

Validity and reliability refer to the core principles of qualitative research characterizing the quality of the performed study. It is important to consider these concepts at the design stage of research (Marshall & Rossman, 2014). The concepts of validity and reliability are associated with how reliable and valid the data collected by the researcher and interpretation of findings are (S. Kvale, 1996).

### 3.3.1 Validity

The concept of validity in qualitative research means the degree of credibility and truthfulness of the applied design method and data collected and analyzed in the process of the qualitative study (Marshall & Rossman, 2014; Neuman, 2011). While conducting the qualitative study, it is advisable for a researcher to address possible threats to validity by applying verification strategies aimed at increasing the credibility of conclusions (S. Kvale, 1996; Maxwell, 2012).

This qualitative study is characterized by two important threats to validity that can result in invalid qualitative conclusions – researcher bias and reactivity. Researcher bias means that the researcher involves his subjectivity the research process  (Maxwell, 2012). Thus, the conclusions drawn in this thesis are based on the researcher's subjective understanding of the research topic, which in its turn is based on the theoretical frame of reference and empirical evidence collected through interviews. However, it is not possible in qualitative research to consider this issue by completely eliminating theoretical reference of the researcher, his

preconceptions and beliefs. Qualitative research is primarily concerned with understanding how values and expectations of a particular researcher can influence the data collection process, interpretation of findings and conclusions (Hennink et al., 2011; S. Kvale, 1996; Maxwell, 2012).

Reactivity refers to the influence of the investigator on the settings and individuals under study (Hennink et al., 2011; Maxwell, 2012). However, it is also not possible to ignore the actual influence of the researcher due to the fact that the researcher is part of world under study. The information provided by the informants is always influenced by the interviewer and the interview situation. However, a meaningful goal of the qualitative research is not to minimize the effect of the researcher's influence, but to understand it and use it productively (Maxwell, 2012). Moreover, it is important to understand how the researcher influences what the informant says, and how this affects the validity of conclusions drawn from the interview by the researcher (S. Kvale, 1996; Maxwell, 2012).

The following strategies recommended by Maxwell (2012) and Kvale (1996) were applied in the study in order to eliminate these validity threats and increase the credibility of conclusions.

First of all, I tried to avoid my subjective understanding of the studied phenomenon, and kept focus on the meanings and perspectives shared by multiple participants related to the topic under investigation. I was neutral during the interview sessions and did not express my opinion on raised issues and topics. Secondly, I checked the wording of questions for them not to impact on shaping the content of the informants' answers. In addition, I checked the interview guide in relation to leading questions to minimize their unintentional impact on the answers. After the pre-test interview, some of the questions were either removed or rephrased in a more neutral way. Finally, I have also applied the validation strategy in order to get feedback about the data

received from the informants to minimize the possibility of misinterpreting the meaning of what they said.

### 3.3.2 Reliability

The concept of reliability indicates the consistency of research findings (S. Kvale, 1996; Patton, 1990). Investigation of trustworthiness is important for demonstrating the reliability of the given qualitative research. To increase the trustworthiness of findings it is necessary to provide a detailed description of methodology applied in the research along with statements on how personal bias may affect the interpretation of the findings (S. Kvale, 1996; Patton, 1990). To achieve high reliability in my thesis I recorded the interviews by recording device, thus avoiding the risk of losing valuable information provided by informants, furthermore all interviews were transcribed for increasing the reliability of the data for closer analysis (S. Kvale, 1996).

### 3.4 Generalization

The concept of generalization traditionally refers to whether the findings could be generalized to a broader population (Marshall & Rossman, 2014; Neuman, 2011). Generalization in qualitative research is rather challenging due to a small sample of population investigated. Generalizing of qualitative findings to other populations is understood as its external validity and viewed as weakness in the qualitative research (Marshall & Rossman, 2014). The concept of external generalizability introduced by Maxwell (1992) refers to whether generalization of findings and conclusions based on particular settings and group studied can be extended to other settings and group. Kvale (1996) sees that the generalizability of the findings of the qualitative research could be possible through the development of qualitative research into further quantitative studies, i.e. when findings of qualitative interview research serve as the basis for constructing survey questionnaires allowing to test the generalizability of

the interview results. In spite of the fact that no direct generalization is possible in the given study based on such small sample employed in qualitative research (Maxwell, 2012), however, the findings of this study can be interesting to nature-based tourist companies as the experience of other actors is reported. Moreover, the findings could make them aware of what other companies focus on in order to succeed in risk communication and encourage them to analyze and improve their choices in communication practices that might result in better consequences.

## 3.5 Ethical considerations

In the process of planning and designing this qualitative research a set of ethical issues were taken into consideration. The first principle of informed consent was important at the stage of recruiting participants for the research (Hennink et al., 2011; S. Kvale, 1996). In most cases, general managers employed at the tourist companies in nature-based tourism were contacted by e-mail first. They were provided with sufficient information including the topic and the purpose of the research project, its focus areas, design and anonymity of the participants that allowed them to consider participation of their employees in the research. Moreover, the general managers gave permission to contact company´s employees responsible for communication for interviewing. The latter were also provided with the same information about the research project and procedures. In addition, participants of the study were informed of being recorded during the interview and expressed a consent to it by signing a written consent form.

The second principle applied in the project refers to self-determination, meaning that all participants were informed about their voluntary participation in the project as well as their right to withdraw from the study at any time without stating any reason (Hennink et al., 2011; S. Kvale, 1996). At the stage of data collection those who agreed to take part in the research project were again provided with the information on the purpose of the study and how the collected data would be used. All participants of the interview expressed consent to the use of digital recorder during the interviews.

Other issues to be considered at all stages of the research were ensuring anonymity and confidentiality. The participants were assured that transcripts of the interview would neither hold identifiable information nor digital recording of the names of participants or company would take place in the data analysis, moreover, the files with the interview would be coded with numbers and list of names would be stored separately from the data. In addition, the participants were also assured that all recorded data would be stored to ensure confidentially and deleted by the end of the project.

Finally, it is worth mentioning that neither direct nor indirect personal data has been collected or recorded during this research project and therefore the project was not subject to notification to the Norwegian Center for Research Data ("NSD,").

## 4. Results:

The chapter is devoted to the main findings drawn based on the analysis of documents and interviews performed. It starts with presenting the interrelated factors that make risk communication successful according to the representatives of the companies, followed by the findings related to the strategic approach to risk communication affecting risk communication practice. The chapter ends with summing up for each research question.

## 4.1 Research question 1: What factors contribute to successful risk communication practices in nature-based tourism

The results of the interviews are used to provide answers to research question 1. The structure of the chapter is based on how different companies implement risk communication in practice and factors that contribute to successful practice.

### 4.1.1 Promotion of risk communication

Based on the interviews it was found out that risk communication is perceived as the main focus of safety aspects in the activities of the companies represented by participants in the project. These companies practice risk communication aiming at preparing tourists to hiking in the Norwegian nature under changeable weather conditions and getting safe experiences by being properly dressed and equipped, as well as making sure that they fully understand risks of doing the hike. "The companies understand risk communication as a part of the promoting process when they start selling their packages" as according to the Norwegian legislation (Produktkontrolloven, 1976), if a company provides services or sells some product, in our case hike or guiding tour, it is responsible of properly informing customers about the risks (Informant 5).

The informants represent companies having a diverse system of communicating risk and promoting risk information, depending on their function: whether they act as the destination

company providing information to tourists, as a nature guide, a trekking organization, or as responsible for physical infrastructure, transportation services or rescue operations.

Marketing destination companies understand risk communication as providing the right and correct information and communicating the consequences of ignoring safety and risk aspects (Informant 3, 8). Both one-way communication is realized through displaying and regular updating the information on the web-site, as well as real-time information promoted through social media, and two-way communication when the guests apply personally for the information (Informant 3).

Informant 1 and Informant 4 represent companies with a very structural system of risk communication and its promotion through their web-sites, in the booking  process and actual hiking followed by risk assessment on hike completion. Their risk information includes both difficulty degree of hiking routes, weather conditions, necessary clothes, needed equipment and other safety measures. In addition, Informant 1 provides tourists with detailed information about possible risks of a hike at its start followed by information shared in the process of hiking including safety instructions and demonstration of risky places that may threaten safety of tourists.

Informant 1 also shared an interesting experience of introducing a liability waiver to be signed by tourists stating that risk is involved in the tour and guides will do their best to reduce risks, but hiking still remains the tourist own responsibility. In addition, tourists are asked to provide information about their health problems that can affect hiking experience. Furthermore, Informants 1 and 4 tell about their practice of asking feedback from tourists in the form of questionnaire on how they feel after the tour, how difficult it was, what experiences were the best and what scared them. As stated by Informant 4 this questionnaire is used for risk assessment and updating risk information for future tours. The same procedure and its relevance for risk assessment was underlined by Informant 4 and Informant 7.

Informants 1, Informant 3 and Informant 7 tell that risk is regularly communicated through the web-sites of their companies by sharing risk-related information, hike description, difficulty degree for each hiking route and weather conditions. In addition, risk communication is also promoted through e-mails, telephone calls, mass media, a whole range of communication platforms in the marketing companies (Informant 3, 8). Informant 1 and Informant 4 point out that sending information packages beforehand followed by a brief orientation at the start of a hike is the most common practice.

The common practice presented by Informant 6 deals with communicating risk to tourists at the parking lot, close to the starting point of hiking, and offering them to rent necessary equipment and clothes. In addition, tourists can get a leaflet with practical tips, trail description, necessary equipment, recommendations on what to do in emergency situations. According to Informant 6 risk analysis was performed for his company for three hiking destinations covering mapping risk, its location, degree and contains instructions for solving risky situations.  The afore-mentioned risk analysis applies risk communication as one of the safety measure on a regular basis as mentioned by Informant 6.

All this is viewed as helpful in achieving the aim of "keeping guests safe under changeable weather conditions and preventing them from unexpected happenings" (Informant 6). In addition, the safety aspects and good risk communication practices acquire special relevance when working with kids, as stressed by Informant 4.

Furthermore, in order to increase the efficiency of risk communication a new exciting project is under the development by a marketing company on filming safety instructions, tutorials, videos for tourists visiting the Norwegian iconic destinations (Informant 8). The project is called "Safety Information Project" and aimed at providing safety instructions by making each destination specific – "what you need to wear, what equipment you need, it is necessary to use the local guide" as stated by Informant 8. According to Informant 8 such videos

will increase both security and value-added experience of tourists, "stop people from hiking in treacherous conditions and make sure they receive good experiences when all precautions are undertaken". In addition, the project includes filming of tourists who share their personal experience after making a tour that will also contribute to safety issues and risk communication within the project according to Informant 8.

Moreover, it is implied that all short videos and tutorials created within this project will be communicated through web-sites of destination and marketing companies and mass media (Informant 8). It is also planned to forward videos and tutorials to foreign tourism agents promoting nature-based tourism in Norway. As mentioned by Informant 8, another contribution to risk communication will be creating a 3-dimension google map with trail drawings to be ready in the middle of June.

**4.1.2 Forms of risk communication**

The informants distinguish between educational and personal forms of promoting risk communication.

Risk communication through educating tourists on how to hike properly beforehand is viewed as very important by Informant 3, due to the lack of warnings in the communication practice before.  As stressed by Informant 3 "educating people before they arrive to the destination on what they will experience in hiking and what risks it might involve" is a new focus in risk communication. The information is displayed on the web-site and contributes to the educating people about risks and "when tourists apply personally they have at least some notion about risks and safety aspects of hiking they read about before" (Informant 3).

Personal communication is viewed by all informants as the most efficient form of risk communication, whereas all of them agree that risk information provided on web-sites is not thoroughly read or simply ignored. For example, the experience of communicating risks in

personal communication at the starting point of hiking Preikestolen in winter season turned to be very successful and resulted in reduction of both happenings and rescue operations according to Informant 6.

The value of personal communication is illustrated by the example given by Informant 6, when an employee working at parking lot in Kjerag does not allow tourists to go to Kjerag by simply saying "no, you are not going to Kjerag today". The value of such communication is confirmed by Informant 5 - "so probably we avoid some rescue operations because of him". According to Informant 5 "people with different personalities and ways of talking are needed for communicating risks".

Videos are pointed out as one of the efficient form of risk communication, demonstrating "how the weather could be changed within ten seconds and what the consequences could be of not being prepared to the Norwegian nature" (Informant 5). As Informant 1 puts it "Pictures are better than text, videos are better than pictures and personal demonstrations and briefings are better than video. And then the last thing is an actual accident. That's very efficient but then it's too late".

In addition, multiple contact points are emphasized by Informant 1 as a relevant form of risk communication: "before they book, after they book, when they meet up for tour and during the tour… it is not enough just to tell things once or just have text on the web-site".

### 4.1.3 Challenges of risk communication

All the informants outline certain challenges in communicating risk to tourists, cultural and language barrier being the most important ones, as well as length of stay "as tourists might come only for one day" (Informant 3).

Exposing tourists to the information is viewed as the challenge for destination marketing (Informant 3). As expressed by Informant 1 "tourists using guided hiking are easily exposed to

risk information, while tourists hiking on their own can simply ignore the risk information though they can get it everywhere". In addition, it is impossible to estimate the effect of risk communication with independent tourists, as "we often don't know what happens afterwards, they don't contact us afterwards" (Informant 4).

Ignoring risk information is also caused by the limited length of stay when tourists "want to go anyway, just want to get to the top no matter what they learn about risks" (Informant 1). Additionally, as it was observed by Informant 4, foreign tourists "consider themselves to be experienced enough and don't perceive hiking in Norway so challenging, so they simply ignore the safety information". "The challenges are, for instance, is that you don't really know if they understand and don't really know if they care" (Informant 6).

According to Informant 8, globalization is also viewed as a challenge for the Norwegian nature-based tourism with cultural differences affecting heavily understanding and using the information. The informants agree that on the one hand, it is hard to communicate risks to foreign guests, on the other hand, it is easier to promote risk communication to tourists coming from the countries with a similar type of geography as Norway has (Informant 3, 8).

One of the important issues mentioned both by Informant 2 and Informant 6 is that marketing organizations should stop promoting the iconic destinations in Norway internationally with pictures of beautiful nature on sunny summer days that appear to be confusing for the tourists.

**4.1.4 Risk message**

The Informants unanimously admit that it is rather difficult to achieve the best influence on the tourists' intentions with the help of text containing risk information. They agree that to achieve impact the text should be written in big letters, underlining should be used and it shouldn't contain too much information. As Informant 5 puts it "the text should be a part of the

main message sent to tourists before: welcome to Norway, welcome to our beautiful nature, but be aware the hikes are not so easy, you need proper equipment, you need to be able to carry fifteen kilos on your backs for many hours as well as to carry back your garbage".

The following common aspects of risk message are identified by Informants: it should be simple and short, formulated in a way not to scare people, shouldn't be "patronizing" (Informant 1). Simple texts are used for risk messages so "that people want to read, so I believe in simple communication… It's not beautiful words, but the message system is the most important" (Informant 4).  Furthermore, it was pointed out that the message should be personal, informal and direct. The personal experience could be also included into messages, by introducing "I don't recommend, this is my advice", that are important in "showing the tourists that we care" (Informant 7).

The content of the message is also perceived as very important by Informants and they agree about the common issues - seasonal situation in the hiking route, equipment and clothes to be used.

Moreover, in order to achieve the best influence on tourists the text message should be complemented by pictures, videos and tutorials from destination companies web-sites as recommended by to Informant 1 and 4. In addition, providing tourists with Norwegian "Fjellvettreglene", the Mountain Code, in the form of a leaflet or attaching it to e-mails in written communication is also viewed as one of the possibility (Informant 7).

The following channels for risk communicating were identified: Internet, companies' web-sites, people meeting tourists at a starting point of hiking mentioned by Informant 2. According to Informant 2 it is rather difficult to implement it at for all hiking destinations, as "who should stand at Dalsnuten and tell people with little children that this is really a pretty tough tour?"

Informants 5 and Informant 8 stress the need of a national standard for risk information specific to nature-based destinations in Norway to be applied on every marketing and destination web-sites and mass media.

### 4.1.5 Risk perception

Getting response in the communication process is viewed by Informants as an important aspect in risk perception. According to Informants 1, 4, 6 getting response means that risk information is understood in the right way and recommendations will be implemented by tourists. Informant 6 provides an interesting example of employing mature staff experienced in hiking and communication for communicating risks when their authoritative personality affects heavily risk perception. However, as mentioned by Informant 4, "you never know if the tourists understand your message correctly, perceive it in the same way as you understand it".

As it is stressed by Informants 1 and 4 the face expression and the feeling of connection could be an evidence that the tourists get the message. In addition, a two-way communication process contributes to risk perception according to Informant 4. A two-way communication proves to have a highest impact on risk perception as stated by Informant 5.

### 4.1.6 Trust

The next factor of successful risk communication refers to trust ensuring that the message reaches the recipients.

All Informants agree about the role of trust and its impact on the process of risk communication and perceive "building trust as the main responsibility of the company" (Informant 6). Trust in tourism business is built before tourists choose a company, when choosing the company "they expect to be taken care of by professionals and will perceive risk information as reliable and trustworthy and accept the risk level" (Informant 4).  Trust is built

based on expertise of the company, staff competence and ability to handle risk situations in a proper way as expressed by Informant 3 and 5. However, "this trust can easily be turned down if this company appears not to have everything in order and are not capable of handling the crisis situation", as Informant 5 puts it. As Informant 1 outlines, trust is built by showing "how the company handle the situation in a proper way if something bad happens, demonstrating to the tourists that they are in safe hands".

According to Informant 3 Tourist Information is considered to provide a reliable information by customers everywhere, the same refers to official marketing companies in tourism business (Informants 3, 7, 8) and the company's membership in the European and Global networks (Informant 4).

Informants state that positive reviews on the companies' web-site, in mass media, rating in Trip Advisor make tourists perceive the company as trustworthy and the information they receive as reliable. Rating the company on Trip Advisor is generally understood as one of the ways of building trust to the company. However, according to Informant 3, Trip Advisor recommendations and reviews are not necessarily trustworthy as reflecting a subjective view.

Trust is considered by Informant 2 as having no relation to safety and risk communication. As expressed by Informant 2 trust doesn't really matter for tourists who seem to pick the cheapest prize, so "trust has nothing to do with safety on the on the tourist side".

Introducing a quality certification system in the Norwegian tourism business is understood as the most important way of achieving trust of customers by Informant 8. Such system, already developed and implemented in Iceland and Scotland, should be introduced in Norway, too, according to Informant 8. He understands certification of both tour products and nature guides as extremely important for the future development of nature-based tourism playing a growing role in building trust. Moreover, certification implies increasing

competitiveness of nature-based tourism business with other countries, such as Iceland, New Zealand and Scotland as stated by Informant 8.

### 4.1.7 Public

The informants distinguish tourists when communicating risks based on such differences as sex, age, whether they travel individually or in groups, experience, cultural differences being the most relevant.  Thus, Informant 3 distinguishes between tourist from Nordic countries and the rest of the world when providing risk information. Others go further and make adjustments in the style depending on the cultural difference when providing information packages, tailoring the information and communication when they work with different age groups or experts in this or that field as stated by Informant 4.

It is mainly the cultural difference that makes it difficult to reach some guests with risk information in comparison with the others (Informant 1, 4, 6). Informants perceive communicating risks to Norwegians as the easiest, whereas they consider it challenging to communicate risk to Europeans as they are quite sure that they know what they are doing based on own experience that "blocks control over the information received" (Informant 4). At the same time, Informants confess that it is easier for them to communicate with Europeans than with other nations. As it is expressed by Informant 6 they need to learn more about other cultures as well as Informant 5 puts it "more qualified people in communication and culture, experts in social anthropology, sociology and psychology" to succeed in understanding their guests and how to communicate risks to them.

Individual tourists are perceived by Informants 1 and 4 as the most difficult ones in risk communication practice. As stressed by Informants 1, 3, 4 risk communication is experienced as a difficult practice with tourists coming from China, India, Japan, as "they expect everyone to help them and they are used to getting it as they want, I think many of them. It's not like that

in Norway, you have to put in your own effort, you have to be self-sufficient, you have to carry what you need in your backpack and come with bags, you know", according to Informant 5.

The language difference presents no problem for marketing destination companies, as they provide information on the web-site in many languages, so the problem of cultural difference for them "is more about trying to provide the information that would be quite coherent with what they know, so that tourists should find more information in their own language if they don't speak English, Spanish or German" as expressed by Informant 3.

Informant 3 underlines the importance of asking correct questions when addressing tourists with different cultural backgrounds and "usually the ones coming to apply for the information would be the ones that have got through the most information about hiking", so it is often the people "that don't seek information, are not really equipped for the hike and have most often accidents" (Informant 3).

According to Informants 3, 6 the risk messages are not customized based on cultural differences, but all of them have simple language and "sometimes it is necessary to repeat messages, especially to the tourists coming from the countries where people are not so skilled in mountain hiking" (Informant 6). If a group of tourists is entered by people of different cultural background, risk messages are repeated and rephrased in a simpler way for everyone to understand the message as "it is necessary to be as clear as possible and even just hope that they understood and would tell you if you ask them to raise hands if they understood" as Informant 4 explains.

### 4.1.8 Summing up on successful factors

To ensure success in risk communication a comprehensive approach should be realized by nature-based tourism business with a combination of all factors to be taken into account that in turn are interrelated with each other.

The first factor refers to promotion of risk communication. The focus of promoting risk communication has shifted from how one should practically hike to educating people on safety aspects at the stage of planning related to what they will experience in hiking and how they should be prepared to it depending on the seasonal information. The Informants emphasize high importance of educating due to the lack of warnings in the communication realized before.

Both education and personal communication contribute to successful practices of risk communication. Personal communication, dialogue, is recognized as the most efficient form of promoting risk communication. Among other efficient forms pictures are mentioned, as well as videos demonstrating changes of weather and their consequences, rescue operations. Safety instruction videos and tutorials will evidently become the most efficient forms as they will be standardized and displayed on marketing and destination web-sites, also forwarded to travel agents promoting nature-based tourism in Norway internationally.  It is obvious that showing different types of weather conditions with fog and rain will contribute to getting a more realistic view and better preparedness for the hike on the part of tourists.

The second factor deals with formulating messages containing risk information. To achieve the best impact on tourists the language should be simple and easily understood. In addition, the message should be short, written in big letters with highlighted and explicit information. It should be informal and direct, might include personal experience and care for tourists. The most important information should go first in a message.

When speaking about the risk perception as the successful factor in risk communication practice, the most important aspect refers to getting response from the guests in the communication process proving that risk information is perceived and adequately understood. A two-way communication process has the highest impact on risk perception and contributes

to understanding that tourists get the message correctly, though it is understood as rather challengeable.

One more factor refers to trust ensuring that risk information reaches the recipients. In tourism business trust is built before tourists choose company. When buying its services, tourists trust its expertise and expect to be taken care of by professionals meaning also that they will listen to risk information and follow it. Positive reviews on the companies' web-site, in mass media, ratings in Trip Advisor, all these make tourists perceive the company as trustworthy and the information they get as reliable. In addition, marketing and destination companies are perceived by customers as providers of reliable information, as well as membership in the European and Global networks. Trust to tourism business is contributed by the expertise of the company, competence of its staff and ability to handle risk situations in a proper way. To be able to compete with other countries selling experiences in nature-based tourism, certification of both tourist products and nature guides will play an increasing role in building trust.

The last factor presented in the paper is the public. Many companies tailor risk communication depending on many differences, the cultural difference being the most important. Moreover, some companies acknowledge the lack of competence in reaching some of their guests. They admit that they need to learn more about other cultures for understanding their guests and conveying risk information in the best efficient way. All this proves that the Norwegian tourism business needs higher competence in communication and culture, sociology and psychology to succeed in understanding how to communicate risks to their international guests.

Asking correct questions is also mentioned by Informants as being helpful in reaching tourists. In addition, tourists travelling individually and not in groups are perceived by Informants as the most difficult recipients in risk communication practice. For some of them

companies, cultural difference means providing the information on the web-sites coherent with what tourists know.  If a group of tourists consists of different nationalities and speak different languages Informants stress the necessity to repeat risk message several times, rephrase it in a simpler way for everyone to get the message.

In addition, challenges of risk communication are outlined by Informants. Though we cannot refer challenges to the factors that affect the success of risk communication directly but knowing them will undoubtedly contribute to the process of communication.

## 4.2  Research question 2: What is the strategic approach to risk communication employed by tourist companies?

The answers to research question 2 are provided in this part of the thesis based on the interviews. The chapter reflects on the strategic approach to risk communication and identifies factors that contribute to it.

Strategic approach to risk communication in nature-based tourism is understood by Informants as being at the starting point of its development and perceived as a large developing area (Informant 5, 8). The notion of risk communication in nature-based tourism is recognized by Informant 6 as rather new. The informants stressed that to achieve a clear strategy in risk communication at the company level, a common strategy at the tourism business level all over the area is needed (Informant 6).

All the Informants mention an overall strategy of their companies with communication is a part of it covering also aspects of risk communication. According to Informant 1 risk communication is included into Health-Environment-Safety plans. For instance, tourists are always asked for the medical information to assess their physical abilities before hiking according to HES plans (Informant 1).  HES plan of a transportation company includes risk and safety issues when driving tourists by bus, but not in hiking according to Informant 2.

However, there is clear evidence that companies represented by Informants in the study start thinking on incorporating risk communication in their strategies "on how we communicate the risk parts, inform the guests when they come what they are going to experience - we are in Norwegian nature, the weather is changing, you may not find the track. All those parts of information are not covered very well" (Informant 6).

According to Informant 1 no clear strategic approach to risk communication exists at the company level, however, nature guides know about risks and share them with tourists, so in this case the company mainly rely on social skills of their guides. Informant 2 perceives risk communication and safety aspects in nature-based tourism as common knowledge of any Norwegian: "if you go on a hike, we make our precautions and that is the way we Norwegians think and feel about using our nature, and this is what we try to teach our guests".

One of the examples on implementing risk communication strategy in practice at the company level might be the assessment of physical abilities of tourists in the process of hiking Kjerag as outlined by Informant 1. Based on this assessment tourists that seem too weak, sick, not in shape or lack necessary technical skills are turned back as the guide considers the person not to be able to complete the hike – about 5% of tourists are suggested to turn back and wait for the whole group according to Informant 1.

Identification and communication of risks is pointed out by Informant 8 as one of the issues to be taken into account when developing tourist products that will also include adaptation of product to risk associated with it and increase of tourists' safety. The important point stressed by Informants 8 and 5 relates to reducing damage to nature caused by the tourist products. All these aspects will contribute to the strategic approach to nature-based tourism, according to Informant 5 and 8.

Informant 5 draws a conclusion on necessity of integrating risk communication into the core areas of tourism business to make it really sustainable as "most of the foreign guests don't even know about all pros and cons of going out into the nature and it is the responsibility of the whole business to tell them". Informants 5 and Informant 8 introduce the concept of sustainability understood by them as both increasing value-creation of nature-based tourism and protecting nature, preserving nature.

### 4.2.1 Summing up on strategic approach to risk communication

Informants agree that it is possible to get the strategic perspective in risk communication and promotion of safety aspects when risk communication is integrated in the whole nature-based tourism business. Such approach will contribute to sustainability of nature-based tourism that requires not only one-time actions such as allocation money by the government for National tourist routes this year or money allocated for infrastructure development for Preikestolen and Kjerag for building tourist shelters, but continuous measures aimed both at increasing safety of tourists and preserving nature.

One of the main points in risk communication as a strategic function identified by the Informants refers to risk messages:  to communicate messages clearly and consistently, to develop messages of the same standards to be understandable by most of the people. The channels of spreading risk information is under change now, but not the message content.

## 5.  Discussion

The data from qualitative interviews have provided a clear picture of risk communication practices realized by the nature-based tourist companies. Based on linking the findings from the data and theoretical perspective I will be able to find out the factors that contribute to successful risk communication practices in nature-based tourism. Moreover, the interviews demonstrated the necessity of developing strategic approach to risk communication at the tourism business level that will contribute to the sustainability of nature-based tourism in Norway followed by implementation it at the companies' level.

## 5.1  Factors that contribute to successful risk communication practices in nature-based tourism

### 5.1.1 Promotion of risk communication

Promotion of risk communication is one of the successful factors contributing to risk communication practice. Shifting the focus of risk communication in tourism business from practical hiking information to educating people beforehand on weather conditions, skills needed and hike-related risks is in line with the theory on risk communication addressing tourists' expectations and knowledge about risks related to specific issues. Here, risk communication practice is made successful by recognizing and responding to tourists' concerns (Renn, 1998).

Personal communication, dialogue, is acknowledged as the most efficient form of promoting risk communication, as both risk communicators and tourists can learn from each other when communicators recognize concerns of tourists and respond thus contributing to successful risk communication that is confirmed by Renn (2008).  It is a two-way communication process that adds to a better performance of the nature-based company in risk communication based on recognizing concerns of tourists and uninterrupted efforts to

communicate risks as Renn (2008) sees it. The improved risk communication will in its turn result in higher trustworthiness of the company and risk competence of its employees as stipulated by Renn (2008) proving the interrelated nature of the successful factors. Two-way communication foresees the direct contact of risk communicator with the tourists planning a hike when both sides play interchangeable roles of an active listener and responsive presenter as outlined by Renn (2008).

Based on the interviews it was found out that the quality of a dialogue between experts and tourists is constantly being improved by the tourist companies by introducing communication at different multiple contact points ("before they book, after they book, when they meet up for tour and during the tour"), as "it is not enough just to tell things once or just have text on the web-site". This development trend helps to overcome the challenge of risk communication in reducing the gap between risks assessed by the companies on the one hand and risks understood by the tourists on the other hand (Leiss, 1996, p. 86).

Among other efficient forms of promoting risk communication the companies mention pictures, safety information in the form of brochures and leaflets, videos demonstrating changes of the weather and its consequences, rescue operations, providing simple messages. All these forms present risk information to different audiences on a large-scale basis as Renn (2008) puts it,

The results of the study show mass media as another area relevant for risk communication in nature-based tourism having a great impact on the reaction of tourists to risk according to McComas (2006). However, as it was stressed in the theoretical research the impact of mass media deals with risk assessment at the social level only but not at the personal level. According to Morton and Duck (2001) people perceive the effect of mass communication as more obvious in relation to others than at a personal level as people consider others to be more vulnerable than themselves in perceiving risk communication in mass media, thus,

personal risk perception being higher when interpersonal communication takes place (Morton & Duck, 2001).

The findings of the study indicate that safety instruction videos and tutorials under the development will obviously become the most efficient form of risk communication in future as they will be standardized and displayed on marketing and destination web-sites and forwarded to international travel agents promoting nature-based tourism in Norway as it was mentioned by marketing company.

One of the findings in risk communication refers to changing promotion of the iconic destinations by showing different types of weather conditions. Such more realistic picture will result in tourist being better prepared for the hike by taking into account all the possible weather conditions and contribute to creating safe experiences of tourists.

## 5.1.2 Risk messages

The second factor deals with formulating messages containing risk information. Messages in nature-based tourism are intended for conveying the information about risks to the tourists. All Informants admit that to be understandable by tourists the language of messages should be simple and lack special terminology that according to Jardine et al. (1997) creates difficulty in understanding and interpreting of messages. The so-called "mixed messages" comprising both technical and simple language can  result in confusion and misunderstanding (Jardine & Hrudey, 1997). Informants agree that the message should be short and not overloaded with details, as well as it should be interpreted similarly to what is conveyed by communicators. Thus, a common language for all parties should be created for messages to be understood by the tourists according to Aven (2010). All guidelines provided by Renn (2008) allowing to achieve the best impact on tourists when formulating messages irrespective of a risk type are confirmed by the study: clear stated intentions, simplified content in accordance

with intentions, avoidance of technical terms and concepts, structuring of information with basic one in the beginning followed by more complicated information in the end. The same two conditions as stated by Breakwell (2014) - clarity and unambiguity - aiming at grasping the attention in risk messages are acknowledged by Informants. In addition, Informants indicate that the message should be informal and direct, include personal experience and demonstrate care for tourists.

The content of the message is perceived by Informants as very important for effective risk communication effort depending on the risk circumstances, its level and type of risk.

The study reveals that risk communication in nature-based tourism should be tailored to specific destinations and trails and have common things, including the information on tourists concerns (about trails) as outlined by Renn (2008). A clear distinction between risk types with possible outcomes and likelihood of their occurrence, acknowledgement of the serious risk-related outcomes is revealed as common for risk communication practice in nature-based tourism.

In accordance with Renn (2008), the information about risk exposure, risk level and possible consequences enter the message as confirmed by Informants. In addition, risk communication practiced in nature-based tourism also covers the information about how tourists should protect themselves in case of potential risk as highlighted in theory (Renn, 2008).

When speaking about content of risk messages Informants indicate that it should refer to seasonal situation in the hiking route, equipment to be applied and clothes. As mentioned by Informants this information has a stronger impact if it is supported by videos on safety aspects and tutorials shared at destination and marketing companies' web-sites and mass media. The most important finding within this factor refers to the development of national standard for risk information specific to nature-based destinations in Norway to be applied on every marketing and destination web-sites and mass media in the nearest future.

### 5.1.3 Risk perception

The most important in risk communication process is getting response from tourists that proves risk information is perceived and understood in the right way to be implemented later in their activities. However, as it was indicated by the informants, one never knows if the tourists understand a message correctly.

Risk perception is influenced by a two-way communication aiming at tourists get through the message as well as by trust to the communicators. It was stressed in the research risk perception relate to behavioral response in a controversial way when we speak about the preparedness to happenings (Wachinger et al., 2013). High risk perception result in a more serious response to warnings on the one hand, but it may reduce willingness and preparedness for actions caused by trust to communicators (Wachinger et al., 2013).

High relevance of risk perception for the development of successful practices in risk communication is aligned with necessity of investigating changes in public perceptions associated with specific risks as stipulated by Frewer (2004). Through understanding differences in individual perceptions and needs for information among different individuals and key stakeholders, the delivery of information will be facilitated (Frewer, 2004).

The finding of the study show that all the companies no matter what services they provide bear the responsibility for safety of their customers and are eager to provide the best experience for them.

### 5.1.4 Trust

The next factor making the risk communication practice successful refers to trust that proves to have a strong influence on risk perception (Wachinger et al., 2013). The study shows that trust is the process where tourists choose to rely on this or that company communicating risk as stated by McComas (2006) and efforts to build trust are taken before tourists choose the

company to buy its services. By choosing the company tourists express their trust in its expertise and expectations to be well taken care of by professionals, it is trust that will make tourists listen to and accept risk information.

The study shows that the importance of trust has increased in tourism business caused by the development of information technologies and replacement of individual risk experience by risk information provided by companies through risk communication as well as replacement of individual risk control by risk management of companies as it was stated by Aven (2010). Establishing trust in companies able to assess and handle risks is understood by Informants as the most important objective of successful risk communication that is in line with theoretical implications of Aven (2010).

The findings of the study prove that building trust is achieved by listening to people's concerns and getting involved in responsive communication supported by Aven (2010). According to Informants trust is developed through a two-way communication process based on systematic feedback and a dialogue that is confirmed by theory (Morgan, 2002). Based on the study results two-way communication is proved to be the most efficient form of risk communication that contributes to creating common understanding of risk, people's reaction to risk assessment and recommendations. It was also demonstrated in the study that building trust can be achieved by including relevant experts in risk communication that corresponds to the theoretical implications (Cherrie et al., 2011).

Another factor of importance for building trust, according to the study findings, is the authoritative personality of the staff working for the company. Thus, the company employs mature educated people, former teachers, competent in hiking and communication to communicate risks to tourists. However, this factor is not articulated in the scientific literature.

Among other factors that make tourists perceive the company as trustworthy and its information as reliable refer to positive reviews on the companies' web-site, in mass media,

ratings in Trip Advisor. In addition, the information provided by official tourist marketing and destination companies is recognized as trustworthy and reliable by customers. The membership in European and Global networks contribute to building trust to companies. Foreign tourists are not able to assess all the risks associated with hiking experience in Norway so they are forced to choose companies and follow experts whose competence they perceive as trustworthy, which is in line with theory (Siegrist & Cvetkovich, 2000).

As the study findings show, one of the important factors for building trust among the customers refers to going through the process of certification for both tourist products and nature guides that will contribute to competitiveness of nature-based tourism business in Norway with other countries promoting adventure tourism. This factor is not indicated in the theoretical research and might be studied later when the quality certification system for nature-based tourism is introduced in Norway.

**5.1.5 Public**

Public is the last factor that makes risk communication practice successful in the given study. The findings in the study show that the companies attempt to tailor content of risk communication messages depending on social and cultural differences, the cultural difference being the most important. It is in line with theoretical implications stressing that tailoring the content of risk communication presents a salient problems for the risk communication process (Aven, 2010).  As it was pointed out in the research different cultural groups have specific attitudes and strategies to risk (Douglas & Wildavsky, 1982; Schwarz & Thompson, 1990; Thompson et al., 1990), thus requiring different approaches to creating risk  messages.

Based on the findings of the study, cultural differences influence risk perception resulting in difficulties to reach some of their guests when communicating risks. The idea that cultural differences should be taken into account to achieve the effective risk communication

is supported by the previous research (Taylor et al., 1997). The study shows that nature-based business in Norway lack of knowledge about non-European cultures and need higher competence in communication and culture, sociology and psychology to succeed in understanding how to communicate risks to their international guests as it was outlined by Informants. The knowledge of cultural dimensions will result in reducing misinterpretation of risk communication messages on the part of tourists as pointed out in the research (Jardine & Hrudey, 1997).

Aven (2010) recommends to make cultural classification of the public to communicators that will contribute to understanding risk perception and response to the risk communication. In practice, the findings of the study illustrate how risk communication is implemented in a group of tourists consisting of different nationalities. In this case risk messages are repeated several times, rephrased in a simpler way, moreover, tourists are asked to confirm whether they understand the message.

The study shows that tourists travelling individually are recognized as the most difficult ones in risk communication practice, however, both individualism and collectivism may influence feelings and emotions related to activities and cause differences in attitude to risk communication and behavior (Hofstede et al., 2010).

As expressed by Informants the cultural dimensions for marketing destination companies refer to providing the information on the web-sites in different languages coherent with what international tourists might know. In addition, when risk information is provided through the web-sites and mass media, the study indicates that the most important is making it visible to be read by those who look for the information that is in line with research stating that dependence on mass mediated information contributes to shaping impact on risk perception (Morton & Duck, 2001).

## 5.2  Strategic approach to risk communication

Strategic approach to risk communication is understood by Informants as contributing to raising awareness of a risk and safety issues associated with the travel experience and interests of tourists as stated by Kuenzi et al. (2008). However, the strategic approach to risk communication is currently under development in the Norwegian tourism business. According to Kuenzi et al. (2008) risk communication strategy serves as the prerequisite for the risk management actions to be implemented by different stakeholders sharing aspects in managing risks in nature-based tourism, their concerns and strategies.  In line with this assumption risk communication strategy in the Norwegian nature-based tourism should involve the efforts of different actors, among them nature guide companies, trekking associations, companies in charge of infrastructure, destination and marketing companies, municipalities. Such approach to risk communication is reflected in the choice of companies to be interviewed within the given study.

One of the findings of the study is that the strategic perspective of risk communication is closely related to the sustainability concept understood by Informants as the basis for further development of the tourism industry.  According to the debates that take place in the Norwegian nature-based tourism sustainability should be achieved not only through value-creation (creating good experience and increasing the profitability), but also through nature preservation, thus creating the corporate responsibility of the companies involved in the nature-based tourism (Pettersen & Christensen, 2017). However, it is not quite clear what a common understanding of sustainability in the tourist business is based on the interviews, though the principle of sustainable development in its general meaning refers to meeting the human needs through integrity and stability of the natural systems to be implemented in four interconnected areas: ecology, economics, politics and culture.

The development of national tourism strategy will contribute to the development of strategy in response to risks of nature-based tourism to be followed later by strategy formulated at the companies' level for planning and conducting risk communication activities as outlined by Tinker et al. (2000).

The general principle of the strategy at the companies' level as stated by Tinker et al (2000) is to focus on preventive measures as part of risk governance and communication with no limitations and prohibitions for hiking destinations. According to Kuenzi et al. (2008) it is strategic approach to risk communication that will allow risk communicators to exercise greater control over risk communication and contribute to its improvement.  So, it is possible to draw a conclusion that the strategic approach will act as a facilitator of all factors affecting the successful practices in risk communication.

## 6. Conclusion and proposal for new research

The objective of this study was to achieve in-depth understanding of the relevant factors that influence the success of risk communication practices in nature-based tourism. In addition, the purpose was to identify the strategic approach to risk communication in nature-based tourism. The findings in the study confirm that mutually interrelated factors explored in the study have high relevance for successful risk communication as presented in theoretical implications. However, some factors have acquired specific perspective when applied in nature-based tourism. The study contributes to understanding of the importance of a holistic approach to risk communication and the role of various interrelated factors affecting successful practices of risk communication leading to safe experiences for tourists.

Speaking about the strategic approach to risk communication the conclusion could be drawn that it will have a higher impact on safe experiences of tourists that will not only lead to satisfied customers but encourage a development of a strong and profitable tourism sector. The study demonstrates that this will require a lot of efforts and knowledge on the part of those who communicate risk in tourism and in the long run result in mitigation of emergency situations, reduction of rescue operations, increase of the safety in nature-based tourism. The given study will also contribute to competitiveness and profitability of tourist companies that will benefit from implementing better communication practices and services with a focus on increased safety.

However, risk communication makes only a part of safety measures with the aim of making hiking in the Norwegian nature for foreign tourists to be perceived safe and not dangerous. This is the challenge for sustainable development of nature-based tourism in Norway to find the balance between promotion of iconic destinations and safe experiences, between high-quality experiences and nature conservation. To achieve it the cooperation between different stakeholders (tourism, government, management, rescue services, outdoor

activities, municipalities and county municipalities) is needed for operating business with risk communication being one of the relevant areas. Sustainability will be achieved both in risk communication area and the core business based on this cooperation and common strategy in risk communication built by sharing strategies among stakeholders and contributing with expertise and experience.

Certain limitations of the study should be mentioned. The major one concerns a limited research sample caused by the qualitative research approach and in-depth interviews as a method for data collection. Due to this we cannot speak about generalization of the study results as wider studies with larger samples are needed to see whether findings of the given study are applicable to other companies. However, the study provides valid information on the participants´ experiences in risk communication.

A further limitation is related to the second research question on strategic approach to risk communication. As the overall strategy to tourism business is currently under the development in Norway there is no clear strategic approach to risk communication at the company's level so far. However, a sensitizing concept of strategic approach draws attention to this important issue that will inevitably affect successful practice of risk communication and contribute to future research that may be also viewed as a strength of this study.

Furthermore, in the process of addressing both research questions, the present study adds to the holistic perspective of successful risk communication backed by the introduced conceptual model, and detailed description of the design.  In addition, it is worth mentioning that few research studies in nature-based tourism have a focus on risk communication, so the current study represents an attempt to fill this gap.

In conclusion, I would like to highlight the need for future research in risk communication in nature-based tourism using quantitative approach with a bigger sample. One

of the possible research might refer to making a survey of the people's responses to the conveyed risks that will allow to understand tourists better and contribute to improving practices of risk communication and facilitating risk communication policies. One more area of future research might concern the sustainability aspects of tourism through finding the balance between business interests of the company, nature conservation and risk communication policy realized by the company.

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**Appendix A: Interview guide**

1. Introduction/information about myself/background

   • Information about myself

   • Information about the project and its background

   • Information about how interview is recorded

   • Question on possibility to use some statements as citation in the thesis

   • Encouraging to give concrete examples relevant to the questions

   • Questions from informants

2. Informant's background

   • Information about himself/herself (education, position)

   • Carrier history and experience

   • The role and responsibilities

**Introduction:**

1. How do you understand the process of risk communication?

   (Who is responsible for risk communication in your company?)

2. When is it necessary for the tourist companies to communicate risk to tourists?

3. How does your company get an information about risks associated with hiking
   destinations?

4. Can you describe how your company is communicating risks to tourists?

   a. How do you assess the impact of your risk communication on tourists? Do they change
   their intentions or not?

5. What is the difference between risk communication and crisis communication?

6. What should be the focus of your company when it communicates risks to tourists?

7. What do you want to achieve by communicating risk messages to tourists?

8. How will you learn that your message is received by the tourists?

9.   What are the challenges of communicating risk to the tourists?

**Promotion of risk communication**

10. How risk communication is promoted in your company?

11. What form of risk communication is the most efficient one?

12. How relevant is the dialogue with tourists for promotion of risk communication?

13. Is it difficult to promote risk messages to the tourists?

14. How should you formulate message containing risk information to achieve the best

    influence on the tourist intentions?

15. How do you understand that the message is perceived similarly to what you meant when

    formulating it?

16. What channels do you consider to be the most appropriate for communicating risk to the

    tourists?  (Why do you think so? Are they relevant to all risk situations?)

17. Do you use a lot of resources (time) for risk communication?

**Trust:**

18. How trust to your company should affect a process of conveying risk?

19. To what extent should public trust the tourist companies as a reliable source of

    information?

20. What efforts are undertaken by your company to build trust among the tourists? What is

    the role of the dialogue?

**Public:**

21. Do you distinguish groups of tourists based on cultural differences?

22. Do you feel that it is more difficult to reach some groups in comparison with the others?

23. Do you consider national/cultural differences of tourists when communicating risk?

24. Do you customize messages depending on the cultural differences groups of tourists?

25. What is the challenge of formulating risk messages for the group of tourists consisting of

    different nationalities and speaking different languages?

**Strategy:**

26. Do you have a strategy for planning and conducting communication activities at your

    company?

27. What issues are included into the risk communication strategy (if any)  (staff roles,

    responsibilities, formulation of risk messages, dissemination strategy, training in

    assessment of risk messages and their effect)?

28. Can you give any examples when risk communication strategy was implemented by your

    company?


    The interview is concluded by asking if informants think I should talk to anyone else

with a competence in the area under investigation. In addition, they are asked if it is possible

to get in touch with them afterwards by e-mail or phone if new questions occur or clarification

is needed.

**Appendix B: Request for participation in the research project "Risk Communication in Nature-based Tourism"**

**Background and purpose**

My name is Natalia Podrazhanskaya, and I take master degree program in international hospitality management at the University of Stavanger. I am conducting the research in risk communication in nature-based tourism for my master thesis to be completed by 15. June 2017. The purpose of the project is to reveal main factors that have impact on successful risk communication process (promotion of risk communication, risk messages, trust, risk perception, public) as well as the strategic approach to risk communication employed by tourist companies. The research topic seems highly relevant for the companies in nature-based tourism as it is necessary for them to be prepared to communicate risk before the risky situation occurs. Good knowledge of potential risks promoted by the companies will influence risk assessment on the part of tourists, help them to take right decision in relation to hiking, enable them to be better equipped for it and avoid hiking in risky situations. I will interview employees who are responsible for communication at tourist companies working with nature-based tourism and practicing risk communication.

**What does participation in the project imply?**

The data will be collected based on the interviews. The questions will concern the research topics mentioned above and focus areas under investigation. The interview is intended to last 40-50 min.

**What will happen to the information about you?**

All personal data will be treated confidentially and not shared to anyone else. I will be the only one of having access to personal data and audio recordings in the process of conducting the research. To ensure confidentiality a list of representatives of the companies will be stored

separately from the data received based on interviews and the participants and the companies they represent will not be recognizable in the publication.

The interview will be recorded and then transcribed. All audio recordings and contact information will be deleted by 15. June 2017 when the project is scheduled for completion. If you have any questions concerning the project, please contact me (Natalia Podrazhanskaya), by tel. 40 62 63 87 or e-mail natalkapod@gmail.com.

# Consent for participation in the study

I have received information about the project and am willing to participate

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(Signed by participant, date)