

*Proceedings of the 35th European Safety and Reliability & the 33rd Society for Risk Analysis Europe Conference*  
 Edited by Eirik Bjørheim Abrahamsen, Terje Aven, Frederic Boudier, Roger Flage, Marja Ylönen  
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 doi: 10.3850/978-981-94-3281-3\_ESREL-SRA-E2025-P8367-cd

## Trust in Risk Communication: Local versus National Responses to Climate-related Risks in Longyearbyen-Svalbard

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This paper explores the complex relationship between local and national authorities in risk communication within Arctic communities, focusing on the town of Longyearbyen, Svalbard. Through an analysis of interview data, the study examines how inhabitants perceive and trust risk communication regarding climate-related risks such as avalanches, permafrost melting, and erosion. While local authorities are perceived as more trustworthy communicators, national authorities face significant scepticism. We argue that this scepticism stems from a perceived disconnect between national policymakers and the lived realities of Arctic life, leading to perceived conflicting messages and ineffective long-term climate related risk management. The study shows that local trust is reinforced by familiarity, transparency, and historical local knowledge, while national policies are often seen as rigid and lacking contextual sensitivity. The findings show that a more integrated communication strategy would bridge the gap between local and national authorities and emphasize the need for collaborative, context-specific approaches to enhance community resilience in the face of escalating climate-related risks. This study contributes to understanding how trust shapes the effectiveness of risk communication in remote and vulnerable regions like the Arctic.

**Keywords:** Trust, Risk communication, Climate change, Svalbard-Longyearbyen, Arctic.

### 1. Introduction

The Arctic region is undergoing some of the most dramatic environmental transformations due to rapid climate change (Meyer, 2022), posing significant challenges to risk communication and public safety. Svalbard, Norway's northernmost territory, is particularly vulnerable, with Longyearbyen—the primary settlement—facing heightened risks from climate-related threats like avalanches, permafrost thaw, and coastal erosion (Hanssen-Bauer et al., 2019). These threats require efficient and reliable communication between authorities and residents to build community resilience (Antonsen et al., 2022).

However, the governance structure in Svalbard, where both local and national authorities play roles in risk communication, introduces complexities in managing these risks. This dual-level system reflects differing approaches to risk communication, with national authorities focused on broad policy frameworks and local authorities more attuned to immediate community concerns, creating potential conflicts in trust and effectiveness (Renn, 2008; Lundgren & McMakin, 2018).

Trust is a fundamental element in risk communication's effectiveness, influencing how communities perceive, understand, and act upon information (Badu et al., 2023; Covello, 2003). In crisis settings, particularly

within geographically and culturally distinct communities like Longyearbyen, trust in authorities could vary depending on proximity, communication style, and perceived relevance to the unique local environment (Siegrist & Cvetkovich, 2000; Heath & O'Hair, 2009). Local authorities, often use accessible platforms to communicate in real-time, enhancing their credibility among residents (Badu, 2023). In contrast, national authorities may rely on more formal, centralized channels that may be viewed as rigid or detached from the lived realities of life (Kruke & Olsen, 2012). Such differences could lead to different levels of trust, affecting the overall effectiveness of climate risk communication in vulnerable regions (Steelman & McCaffrey, 2013; Veil et al., 2011).

Accordingly, this study investigates the dynamics of trust in risk communication by comparing perceptions of local and national authorities among inhabitants of Longyearbyen. We explore some factors such as proximity, communication platforms, contextual awareness, and responsiveness to understand how these elements shape trust.

Specifically, we aim to explore the research question: *How does inhabitants in Longyearbyen's trust in risk communication differ between local and national authorities in Svalbard, and what factors influence these trust dynamics in the context of climate change?*

This study contributes to the growing body of research on trust in crisis communication, offering insights into how tailored, context-sensitive approaches may enhance resilience and safety in remote regions (Boin et al., 2010; Renn & Levine, 1991).

We proceed with a review of the literature on risk communication approaches and the factors influencing trust in risk communication. Then, the research methodology is presented, followed by the results, and discussion on the implications for enhancing trust in climate risk communication. Then, we reflect on how to integrate national and local strategies to foster a more cohesive approach to risk communication in the Arctic.

## 2. Theory

### 2.1. Top-down versus decentralized approaches to risk communication

Risk communication in crisis management can generally be classified into top-down (centralized) and bottom-up (decentralized) approaches, each with distinct implications for public trust and engagement (Kruke & Olsen, 2012). The top-down approach, in which directives and information primarily is pushed by central authorities to local actors (Schneider, 2008), is widely implemented to deliver standardized information and maintain policy consistency across various regions (Covello, 2003; Renn, 2008). In this approach, national authorities typically assume control over risk messaging, aiming to provide information aligned with broader policy frameworks and long-term strategic objectives (Kruke & Olsen, 2012). While centralized risk communication can enhance coordination across government bodies, it may fail to address the unique needs and concerns of specific communities, particularly those in vulnerable or remote areas. According to Palttala et al. (2012), top-down communication may even inadvertently alienate local populations if messaging appears disconnected from local realities, thereby risking a decline in public trust and cooperation.

Decentralized risk communication, on the other hand, involves a greater role for local authorities who possess closer knowledge of community needs and cultural contexts. This approach is often characterized by flexibility and adaptability, enabling local actors to deliver information that is both timely and specific to immediate threats (Rogers et al., 2007). Decentralized communication is also more likely to build community trust, as it facilitates transparency, proximity, and direct engagement with residents. Heath and O'Hair (2009) suggest that in crisis situations, localized communication often fosters a sense of mutual responsibility and solidarity between authorities and residents, strengthening public confidence in the risk communication process. This flexibility in messaging is particularly relevant in geographically and culturally distinct regions like Svalbard, where environmental risks, such as avalanches and permafrost thaw, demand a localized understanding of both immediate and long-term concerns (Badu, 2023).

By involving local stakeholders more directly, decentralized approaches can also foster a sense of shared responsibility (Johannessen et al., 2025) and mutual trust, essential components for effective crisis response in tightly knit communities (Steelman & McCaffrey, 2013). This emphasis on collaboration and local relevance has proven effective in fostering resilience (Kruke & Olsen, 2012), as local authorities can integrate traditional knowledge and historical insights into their risk messaging—a factor shown to increase trust among residents (Brunson & Shindler, 2004). However, while the decentralized approach allows for greater community engagement, it also requires strong communication and coordination with national authorities to prevent inconsistencies in messaging that could lead to confusion or erode public trust (Renn & Levine, 1991).

## ***2.2. Some factors influencing trust in risk communication***

Trust in risk communication, particularly in multi-level governance settings, could be influenced by some factors such as proximity and familiarity (Boin et al., 2010), choice of communication platforms and style (Lundgren & McMakin, 2018), sensitivity to local knowledge (Boin et al., 2010; Johannessen et al., 2025), and how responsive and flexible those in charge are as the crisis develops (Lindell & Perry, 2012).

Proximity to the community is a critical factor in building trust, as authorities who share social and physical space with residents are often perceived as more empathetic and understanding of the community's needs (Boin et al., 2010). According to Siegrist and Cvetkovich (2000), familiarity with local conditions and visible engagement with the community positively impact trust by fostering a sense of shared experience. Authorities rooted within the community's social fabric can engage directly with residents, building trust through accessible, consistent interactions (Tyler, 2006). In contrast, authorities seen as distant, both geographically and socially, can lead to perceptions of detachment and a lack of understanding of specific local risks (Uslaner, 2002).

Moreover, the choice of communication platform and style significantly influences trust, as both formal and informal interactive channels can improve accessibility and enhance the

perception of immediacy. For example, some authorities may use familiar social media platforms to reach residents in real-time, fostering trust by providing timely and relevant updates through channels integrated into daily life (Lundgren & McMakin, 2018). Such interactive social media platforms may allow for rapid information dissemination and enable constant dialogue, strengthening public confidence in crisis responses (Veil et al., 2011).

Also, sensitivity to local knowledge is essential in areas with unique environmental risks that require tailored communication. Authorities who are familiar with the specific environmental and cultural context could integrate this knowledge into their messaging, ensuring that communication is perceived as both relevant and trustworthy (Boin et al., 2010). Thus, the public is more likely to trust authorities who incorporate local knowledge into risk messaging, as this could demonstrate an understanding of the hazards faced by the community (Fischhoff, 1995). As Renn and Levine (1991) argued, public trust is often influenced by the perceived relevance and specificity of the information, and communication that fails to account for local nuances may appear disconnected or generic.

Furthermore, the ability to respond quickly and adapt to evolving crises is another essential component of trust in risk communication. Research indicates that in areas subject to rapidly changing environmental conditions, flexibility and real-time responses are fundamental to public trust (Lindell & Perry, 2012; Heath & O'Hair, 2009; Palttala et al., 2012).

## ***2.3. The role of trust in Arctic communities***

Trust and trust building between individuals and within the community is and has always been a cornerstone in ensuring safety in the Arctic (Roud & Gausdal, 2019; Taarup-Esbensen, 2022). For Arctic communities to be resilient to critical events, there needs to be a high level of trust that competent members of society will provide help. Trust and trustworthiness rely on the members responding to an event to be regarded as competent to manage the task at hand, be open in communication, show concern for citizens, and ensure that the level of service meets the community's expectations (Badu, 2023). In general, trust exists between community members; the lack of interpersonal relational

connection to authorities means that they can be regarded as being untrustworthy. For example, the emergence of spontaneous volunteers who take independent action can signify a lack of trust in formal emergency response capabilities.

3. Methodology

This study uses a qualitative research design to explore people’s perceptions of trust in climate risk communication from local and national authorities in Longyearbyen, Svalbard. Data was collected through semi-structured interviews, an approach well-suited for exploring subjective perceptions and complex social dynamics (Kvale & Brinkmann, 2015).

3.1. Participants

The study involved ten in-depth, semi-structured interviews with residents of Longyearbyen (LYR), each of whom had lived in the area continuously for at least one year and was familiar with climate risk communication initiatives by authorities. The sample includes informants of both Norwegian and non-Norwegian nationalities who work in diverse sectors (Table 1). Moreover, none of the informants held formal roles within local or national authorities, ensuring that responses represented community perspectives.

Table 1. Details about the informants

Code	Years in LYR	*Citizen	Field of Work
INF 1	Over 10	N	Mining
INF 2	2-5	NN	Academic Sector
INF 3	6-10	N	Tourism Industry
INF 4	2-5	NN	Retail Sector
INF 5	6-10	N	Academic Sector
INF 6	2-5	N	Tourism Industry
INF 7	Over 10	N	Tourism Industry
INF 8	2-5	NN	Hospitality Sector
INF 9	2-5	N	Hospitality Sector
INF10	6-10	NN	Retail Sector

N = Norwegian    NN = Non-Norwegian

A snowball sampling technique was employed to recruit informants by utilizing community networks to access informants with relevant experience and insights (Noy, 2008). This approach was suitable given the small population in LYR, where long-term residents are relatively few. Although the sample size is limited, the qualitative approach emphasizes depth rather than breadth, allowing for rich,

nuanced insights into the community perspectives (Patton, 2014).

3.2. Interviews

Interviews were conducted in Longyearbyen in two phases: five in March 2023 and five in October 2024. Each interview lasted approximately thirty-five minutes, was audio-recorded with informant consent, and subsequently transcribed for analysis. The interview guide was designed based on an extensive literature review, allowing for targeted inquiry into the study’s research aim.

3.3. Data Analysis

A thematic analysis (TA) was used to examine the data. TA is a flexible, rigorous approach to identifying, analysing, and interpreting patterns in qualitative data (Braun & Clarke, 2022). Initial codes were generated to reflect the main themes identified in the interview guide, while further coding refined these themes in response to insights emerging from the data. The iterative nature of this coding process allowed for a comprehensive analysis, with continuous validation to enhance the reliability and credibility of the findings (Silverman, 2020).

4. Results

The results revealed some factors that differentiate perceived trust in local and national authorities’ climate-related risk communication in Svalbard (see Table 2).

Table 2: Findings on perceived factors influencing trust dynamics

Perceived factor	Insight
Proximity and familiarity	Local authorities’ presence and integration in the community positively influence their trust, while National authorities may be seen as distant and disconnected from local realities.
Communication platforms and engagement	Local authorities regularly communicate using informal platforms like Facebook to reach residents, while National authorities use formal communication channels that are very bureaucratic.
Sensitivity to local context and knowledge	Local authorities are often seen as having deep knowledge of Svalbard’s specific environmental

	risks, while National authorities are perceived as offering generic policies not tailored to local needs.
Responsiveness and flexibility	Local authorities respond quickly and adapt to crises, often involving the community, while National authorities are seen as rigid, slow, and focused on long-term policies.

#### 4.1. Perceived proximity and familiarity

Proximity to the community may have positively influenced informants perceived trust in local authorities. Mostly, local officials are seen as part of the same social fabric, with frequent interaction and shared experiences during crises. This familiarity fosters a sense of trust and cooperation. One informant noted, *"We trust the Governor and local council when they talk about avalanche danger. They live here with us and understand what is happening in the place"* (INF 7). Thus, the presence of local officials as part of the shared social experience in Svalbard fosters a close connection, which strengthens trust.

In contrast, national authorities are perceived as distant and disconnected from the daily realities of life in Svalbard. This perceived geographical and social distance may lead to lower levels of trust, as some informants feel national officials do not fully understand or experience the challenges faced by them. An informant echoed that *"Oslo has said [something] without taking into account the other side. They seem authoritative and do not seem to understand this place [Longyearbyen] is different from the mainland"* (INF 3). This may suggest that national authorities' perceived detachment from Svalbard's unique circumstances creates a sense of "otherness." This distance is not merely geographical but also seems cultural, where residents feel national policymakers fail to fully understand or relate to local challenges. This may emphasize the importance of community integration in trust-building, especially in remote or unique environments where shared experiences are a key factor in credibility and trust.

#### 4.2. Perceived responsiveness and flexibility

The perceived sense of "authoritativeness" for national authorities as expressed by Informant 3 above, may indicate that national authorities are seen as slower to respond and less flexible in their communication. Their policies are often perceived as rigid and focused on long-term

objectives, which do not often align with the perceived immediate needs of the inhabitants. However, local authorities are viewed as highly responsive and flexible in their approach to risk management, providing immediate updates and adapting to rapidly changing conditions, such as during avalanches (see Informant 7 above). Their ability to involve the community in crisis response further strengthens their trust. This also suggests that the residents in Longyearbyen highly value leaders who can demonstrate a level of flexibility and responsiveness during crises.

#### 4.3. Perceived communication and engagement

When it comes to communication, local authorities often use informal approaches to share information with the inhabitants. This includes online platforms, such as "varsom.no" and "Facebook", to communicate real-time updates on risks like avalanches. An informant stated *"Everything happens on Facebook...and online. It is fast and everyone interested gets it. We do not doubt this information [and], I trust what it says there"* (INF 6). Such familiar and immediate channels of communication could enhance trust, as they provide timely and relevant information directly to residents. Such information is particularly valued in times of crisis.

On the other hand, National authorities rely on more formal and centralized communication channels, which are perceived as slow and less responsive to immediate threats. This may reduce their effectiveness in managing real-time crises and erode trust, as residents find national communication bureaucratic and less engaging. An informant expressed his frustrations by saying *"We don't get a clear indication...[and]it takes years to get a good risk picture from the national policy... sometimes, it's conflicting messages even from the policies"* (INF 2). These findings reflect the importance of having communication approaches that fit community expectations and preferences, especially in settings where trust can erode due to slow or indirect communication.

#### 4.4. Perceived sensitivity to local context and knowledge

Local authorities are seen as deeply attuned to the unique environmental and cultural context of Svalbard. Sometimes, their risk communication is informed by local knowledge and is perceived as highly relevant to the specific risks faced by the



community. In contrast, National authorities are often seen as lacking this contextual understanding. Their policies and communication are perceived as generic and not tailored to the community's specific environmental conditions. An informant emphasized, *"They [national authorities] sometimes talk without historical knowledge. They [national authorities] don't have the experiences with Svalbard when they put these [policies] together... they haven't had time to fall in love with the community"* (INF 1). This lack of historical and contextual awareness from national authorities may contribute to a sense of alienation and could diminish trust. Moreover, this perceived gap in understanding could contribute to a sense of alienation among residents and highlights the value of incorporating local knowledge into policy and communication for enhancing trust.

## 5. Discussions

How does then inhabitants in Longyearbyen's trust in risk communication differ between local and national authorities in Svalbard, and what factors influence these trust dynamics in the context of climate change? The results reveal significant trust differences in risk communication between local and national authorities in Longyearbyen, shaped by some factors such as proximity, responsiveness, engagement, and contextual relevance.

Firstly, proximity and familiarity appear critical in fostering trust in local authorities, resonating with theories on social trust in crisis management, which emphasize the importance of embeddedness in the community (Siegrist & Cvetkovich, 2000; Tyler, 2006). Local authorities, through their physical and social presence, seem to develop strong relational ties with the community, which aligns with the notion of relational trust (Tyler, 2006), where authorities are viewed as part of the social fabric who understands and are empathetic to Svalbard's unique environmental risks. Informant 7's comment on trusting local authorities for real-time avalanche updates illustrates this relational trust, suggesting that empathy and shared experience in crises can profoundly enhance public trust. Conversely, national authorities are seen as distant and disconnected from local realities as their centralized risk communications may alienate local populations and tends to overlook the specificity of local needs. The perception of geographical and

social distance, as described by Informant 3, illustrates how top-down approaches (Kruke & Olsen, 2012) can engender a sense of "otherness" that hinders trust, especially in communities where unique environmental factors demand locally specific knowledge. This trust gap emphasizes the need for greater integration of national policymakers into the community to mitigate perceptions of detachment.

Secondly, the style and platform of communication significantly affect trust levels. Local authorities frequently utilize interactive, informal platforms such as Facebook to provide residents with real-time information, enhancing trust through transparency and immediacy (Veil et al., 2011; Lundgren & McMakin, 2018). This approach aligns with decentralized crisis communication theories, which suggest that informal, decentralized channels could promote trust by improving accessibility and engagement (Rogers et al., 2007). Informant 6's observation of trust in Facebook updates underlines that informal interactive platforms facilitate a dialogic communication process, which strengthens trust through perceived relevance and responsiveness (Steelman & McCaffrey, 2013). On the other hand, national authorities' reliance on formal communication channels reflects a more rigid, bureaucratic approach, which may be seen as less responsive to immediate local needs (Covello, 2003). This centralized communication style often focuses on policy consistency but lacks the adaptability valued in real-time crisis settings. Informant 2's frustration with delayed risk assessments from national policies illustrates how formal, top-down communication can undermine trust, especially when messages are perceived as overly bureaucratic or conflicting. These insights resonate with Palttala et al. (2012), who argue that rigid national communication may hinder trust-building, as it fails to meet community expectations for clear, prompt communication.

Thirdly, sensitivity to local knowledge and context emerged as a key factor influencing trust in Svalbard's risk communication landscape. Local authorities are trusted as they demonstrate sensitivity to Svalbard's environmental and cultural knowledge, aligning with Fischhoff's (1995) argument that risk communication is effective when it incorporates local knowledge. Thus, in some cases, risk communication must be context-specific to be perceived as credible and

useful. Local authorities are seen as integrating historical and experiential knowledge into their messaging, which fosters community resilience and mutual responsibility (Heath & O'Hair, 2009). National authorities, by contrast, are seen as lacking contextual understanding, with their policies perceived as generic and disconnected from Svalbard's particular risks, as noted by Informant 1. Indeed, effective risk communication requires an understanding of audience-specific contexts (Renn & Levine 1991), and the failure for leaders to account for such local degree can diminish their credibility. This perceived disconnect could push away residents, emphasizing the importance of having a risk governance that is sensitive to cultural and geographical particularities in fostering public trust (Renn, 2008).

Finally, responsiveness and flexibility are crucial for building trust, especially in high-risk areas like Svalbard, where environmental threats are immediate and dynamic. Thus, having timely and adaptive responses is essential for public trust in crisis situations (Lindell & Perry, 2012). Local authorities' prompt action and flexible responses to avalanches, as noted by Informant 7, are perceived as competent and responsive, strengthening trust in their ability to manage risks effectively. This suggests that flexible, responsive communication and action enhances public confidence in authorities (Badu, 2023). In contrast, when authorities are perceived as rigid and overly focused on long-term policy objectives, they may hinder their perceived effectiveness in managing immediate risks (Kruke & Olsen, 2012). Thus, the focus on long-term goals, while essential for climate change adaptation may still erode trust if residents feel their urgent concerns are overlooked. Therefore, authorities' climate-related risk governance should balance short-term responsiveness with long-term objectives to sustain public trust.

## **6. Conclusion**

The study aimed at exploring how inhabitants in Longyearbyen trust in risk communication differ between local and national authorities in Svalbard, and what factors influence these trust dynamics in the context of climate change? The findings highlight critical distinctions in trust between local and national authorities' risk communication in Longyearbyen, particularly in

addressing climate-related threats like avalanches, permafrost thaw, and erosion. Local authorities seem to have built and improved their trust largely due to their proximity, familiarity, responsive communication styles, and contextual sensitivity. These factors foster a perception of local authorities as reliable, engaged, and capable of addressing immediate climate-related risks effectively.

In contrast, national authorities face challenges in improving trust due to perceived detachment from the Arctic realities, reliance on formal and centralized communication channels, and policies that often has less perceived immediate relevance to the specific needs of Svalbard residents. This trust gap highlights that national authorities' broad, long-term policy focus—though vital for overarching climate adaptation goals—may benefit from more locally adapted strategies. Integrating national efforts with localized, responsive communication approaches can better align with community expectations and needs.

These factors emphasize the necessity of a collaborative, context-sensitive approach to climate risk communication in Svalbard and similar remote, vulnerable regions. To bridge the trust gap, national authorities could work closely with local counterparts to develop communication strategies that integrate local knowledge and prioritize immediacy and transparency, especially when some actors perceive that they are being isolated by national policies. Such an approach would not only enhance the effectiveness of risk communication but also build community resilience by strengthening trust and cooperation between governance levels. As climate-related risks intensify, trust-building through adaptable, transparent communication will be crucial for effective crisis management and public safety in Arctic regions like Svalbard.

## **7. Further Research**

This research contributes to the broader understanding of trust dynamics in risk communication, emphasizing the essential role of governance structures and community engagement in building resilient societies amid escalating climate-related risks.

Future research could explore how these dynamics evolve over time and assess the

potential for national authorities to adapt and become more responsive to local needs.

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