

STRENGTHENING ARCTIC HEALTH PREPAREDNESS:

The way forward



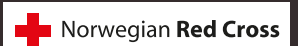
ARCTIC COUNCIL



EMERGENCY PREVENTION,
PREPAREDNESS AND RESPONSE



NORTHERN NORWAY
REGIONAL HEALTH
AUTHORITY



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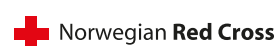
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Preface

Strengthening cooperation on preparedness in the Arctic was one of the priorities for the Norwegian Chairship of the Arctic Council during the period 2023-2025. The background for this included input from Norwegian agencies in the Emergency Prevention, Preparedness and Response (EPPR) Working Group, expressing a desire to further develop Arctic cooperation on all types of preparedness, including health preparedness. Additionally, the Norwegian Chairship stated in its Chairship programme the ambition to enhance Arctic health cooperation.

The Northern Norway Regional Health Authority (HelseNord), representing the health preparedness side in EPPR from Norway, and the Norwegian Red Cross, representing the International Federation of the Red Cross and Red Crescent Societies (IFRC) as an Observer to the Arctic Council, have collaborated on this project on health preparedness. The Arctic Council's Strategic Plan for 2021-2030 specifically mentions collaboration with Observers to enhance meaningful Observer engagement in relevant activities of the Council.

Based on this background, this project has been important in following up on the Chairship programme and the Arctic Council's strategic plan. As the Chair of EPPR during the period when this project was carried out, I am pleased to see what has been achieved. The 2025 Arctic Health Preparedness Conference held in Oslo in January 2025 was a success. There was good and broad participation, excellent professional presentations, and important discussions which together formed the basis for this report. The conference sparked conversations about the importance of including civil society in health preparedness and adopting a whole-of-society-approach in preparing for and responding to Arctic emergencies.

The Arctic consists mainly of sparsely populated areas, small communities with long distances to the nearest neighbour. If an unwanted incident occurs that must be managed with scarce resources. The Photovoice study from Finnmark in Norway shows how civil society, through volunteers, can contribute to strengthening health preparedness throughout the Arctic. This report is an important contribution to the effort to enhance health preparedness in the Arctic. Therefore, the recommendations must be followed up through new projects and concrete measures so that Arctic communities can achieve the best possible health preparedness.

Ole Kristian Bjerkemo

Chair, Arctic Council EPPR Working Group, 2023-2025

Executive summary

The Arctic is changing rapidly. Climate change, demographic shifts, geopolitical tensions, and increasing economic activity are reshaping the region, placing unprecedented strain on health systems and emergency preparedness. This report, based on the 2025 Arctic Health Preparedness Conference and a participatory Photovoice study in Finnmark, Norway, explores how civil society, and particularly local volunteers, can play an essential role in strengthening health preparedness across the Arctic region.

The report outlines three overarching priorities for strengthening Arctic health preparedness, with six specific recommendations for the Arctic Council, national authorities, and civil society partners:

Better Understand the Changing Arctic and Health Preparedness Needs

Conduct Comprehensive Risk and Capacity Assessments

Systematic, region-specific assessments should be undertaken to identify current and emerging health threats, and the preparedness required to address them. These must integrate Indigenous and traditional knowledge to ensure strategies are culturally grounded and locally relevant. We recommend that risk and capacity assessments adopt a Whole-of-Society and One Health Approach. Preparedness strategies should reflect the interconnectedness of human, animal, and environmental health, ensuring inclusive planning across all sectors of society. Authorities and organisations must prioritise community-based health preparedness by actively engaging all sectors of society, particularly Indigenous leaders, civil society, and volunteers.

Strengthen Community Resilience and Local Preparedness Capacity

Build Local Knowledge and Skills

Invest in culturally appropriate training that builds local capacity in first aid, psychosocial first aid, and mental health care, alongside general crisis response skills.

Support Community-Based Organisations

Provide sustained funding and policy support to community organisations with vital roles in preparedness and emergency response. This includes support for volunteer recruitment, management, and retention. Develop mental health support systems for all responders. Ensure culturally sensitive follow-up and care for both formal and informal volunteers, and address gaps such as insurance coverage for volunteer emergency responders.

Enhance Civil Society's Role in Health Preparedness through Collaboration

Explore Task Shifting Opportunities

Identify specific roles that civil society actors can take on during health emergencies to relieve pressure on formal health systems, particularly in remote or underserved areas, or in longer-term crises where the health system is overwhelmed.

Conduct Capacity Mapping

Systematically assess and document the resources, skills, and potential contributions of civil society organisations to better integrate them into regional and national preparedness frameworks.

Promote Joint Trainings and Collaboration

Facilitate regular joint exercises and preparedness trainings between civil society actors and the formal health sector during non-crisis periods to build operational trust and readiness.

This report underscores that effective Arctic health preparedness must be community-led, culturally respectful, and grounded in local realities. Civil society is not a supplementary actor, but a cornerstone of resilience. Effective preparedness requires culturally competent approaches, sustained investment, and collaboration between civil society, health authorities, and Indigenous communities.



1. Introduction

Characterised by vast distances, harsh weather conditions and sparse populations, the Arctic region challenges the delivery of health services and creates a high-risk environment for disasters. Temperatures are rising, the sea ice is melting, and the permafrost is thawing at an alarming rate.¹ At the same time, tourism, industry, and geopolitical interest in the region are increasing. Changes in the climate and environment increase the risk of extreme weather events, natural disasters, exposure to contaminants and pathogens, and the potential for new diseases to spread. Increased human activity in the region also puts considerable pressure on the environment and infrastructure, disrupts traditional livelihoods, and exposes more people to the Arctic risk environment, adding to the burden on already stretched health care and preparedness services.²

Given the region's limited resources and extreme distances, it is essential to ensure effective resource utilisation when preparing for and responding to disasters. Therefore, this project asked: *what role can the civil society play in strengthening health preparedness in the Arctic?*

The report provides a current glimpse of a region and context that is rapidly changing. It presents a culmination of insights from the

2025 Arctic Health Preparedness Conference and the results of the Photovoice study 'Vulnerable and resilient'. By sharing the lived experiences of volunteers from Sør-Varanger Red Cross in Finnmark County we aim to shed light on the complexities of the region and the experiences of local actors and communities. These insights are further expanded through contributions from colleagues and collaborators at the Arctic Health Preparedness Conference. Together, these valuable, yet rarely heard, experiences can help guide possible ways forward. The overall aim of this report is to describe some of the challenges faced by local Arctic communities, while exploring the role and opportunities of civil society in strengthening health preparedness across the Arctic region.

Despite the growing attention to and challenges related to health preparedness in the Arctic, ambiguity remains around its core concepts. There is no universally agreed definition of the Arctic region, multiple definitions exist depending on the context in which they are used. Most are based on temperature or climatic features, and the areas they demarcate are changing due to climate change.³⁻⁴ This report does not attempt to define the region but refers to the areas defined as parts of the Arctic region in the *Arctic Council's Arctic Human Development Report (AHDR)*.⁵

1. AMAP. 2025. *Arctic Climate Change Update 2024: Key Trends and Impacts. Summary for Policy-makers*. Arctic Monitoring and Assessment Programme (AMAP), Tromsø, Norway.

2. H. E. Austerheim, E. Ikonen, R. Elvegård, and N. Andreassen. *Arctic Health Preparedness Conference Report*. Norwegian Red Cross, 2025.

3. 'What and where is the Arctic?' Arctic Centre University of Lapland. Accessed 5 June 2025 <https://www.arcticcentre.org/EN/arcticregion>

4. S. Hangaslammi and I. Hatakka. *Red Cross Arctic Disaster Management Study*. Finnish Red Cross, 2018.

5. AHDR (Arctic Human Development Report). (2004) Akureyri: Stefansson Arctic Institute.

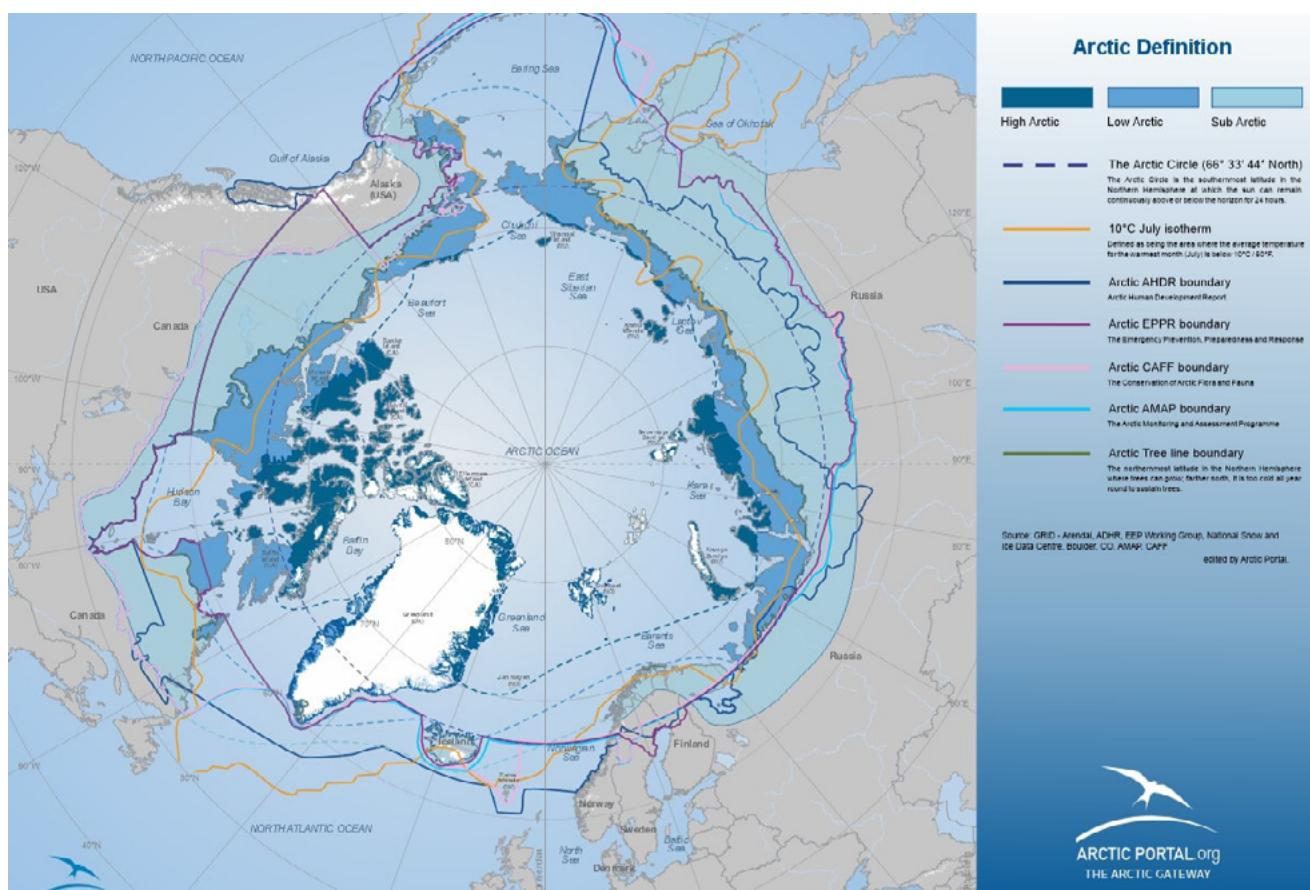


Figure 1: Map of the Arctic region with demarcations used by different Arctic Council actors. Image credit: Arctic Portal 2025.⁶

Definitions of what ‘health preparedness’ entail also vary. At its core, the term refers to the ability to preserve and protect the lives and health of people affected by crises. The Norwegian White Paper on health emergency preparedness (Meld. St. 5) states that health preparedness ‘[...] shall protect lives and health in extraordinary events of varying nature and duration and ensure the provision of essential health services during times of crisis and war’.⁷

From a broader perspective, health preparedness also involves considering factors that threaten people’s livelihoods or affect their mental health, underlying health needs and access to health services.

The International Red Cross and Red Crescent Movement is the world’s largest humanitarian network and is widely present in the Arctic region. The International Federation of Red

Cross and Red Crescent Societies (IFRC) has been an Observer to the Arctic Council since 2000, as the only humanitarian organisation granted Observer status. Observers make relevant contributions to the work of the Arctic Council through engagement primarily at the level of the Council’s Working Groups.

The IFRC supports Red Cross National Societies in their work to improve local preparedness and response capacities, with the aim of preventing and reducing the impact that disasters and emergencies have on people and their communities. The Red Cross consists of community-based volunteers. Through their National Societies, the Red Cross acts as auxiliaries to the public authorities of their own countries in the humanitarian field and can be called upon to assist during crises and emergencies.

6. Created by and available from www.ArcticPortal.org. weblink: *Arctic Definitions Combined NPE - Arctic Portal*. Accessed July 4 2025.

7. Norwegian Ministry of Health and Care Services. 2023. Meld. St. 5 (2023–2024) Report to the Storting (white paper). A Resilient Health Emergency Preparedness. From Pandemic to War in Europe, p. 10.

Most Red Cross volunteers have training in basic first aid, and many volunteers have more specialised training (e.g. in relation to search and rescue missions or in providing psychosocial support), and access to equipment and resources that can be utilised in emergency response. In 2018, the Red Cross emergency response capabilities in the Arctic region were thoroughly documented in the Finnish Red Cross' *Arctic Disaster Management Study*.⁸ The Arctic Health Preparedness Project

attempted to follow up on this work, and further explore how civil society capabilities can best be utilised to strengthen health preparedness in the region.

This report is structured as follows: key findings and recommendations are presented first, followed by a chapter detailing the project's main components, methodology, and limitations. Annexes and references are provided at the end.

About the Arctic Health Preparedness project and authors

The project was a collaboration between the Norwegian Red Cross and the Northern Norway Regional Health Authority (HelseNord), a pre-project whose main objective was to initiate conversations and knowledge exchange on how to strengthen health preparedness and what role civil society can play in this regard. The Arctic Health Preparedness Project was initiated as a project under the Emergency Prevention, Preparedness and Response (EPPR) Working Group of the Arctic Council and funded by the Norwegian Ministry of Foreign Affairs.

Arctic Council Emergency Prevention, Preparedness and Response (EPPR) Working Group (WG). EPPR is one of six Working Groups of the Arctic Council, focusing on the prevention, preparedness and response to environmental emergencies, search and rescue, natural and man-made disasters and accidents in the Arctic. Established in 1991, EPPR works closely with the other Arctic Council Working Groups to produce information on best practices, to assess Arctic circumstances, to generate data and knowledge, and to develop tools for informed decision making and cooperation in the Arctic.

The Norwegian Red Cross is one of the Red Cross National Societies established in the Arctic region, along with American, Canadian, Russian, Finnish, Swedish, Icelandic and Danish Red Cross. The Norwegian Red Cross represented the International Federation of Red Cross and Red Crescent Societies (IFRC) as an Observer to the Arctic Council during Norway's Chairship of the Council from 2023 – 2025.

The Northern Norway Regional Health Authority is one of four regional health authorities in Norway. It was established on 1 January 2002 and is headquartered in Bodø. Its primary responsibility is to ensure the provision of specialist health services to the residents of Northern Norway, covering the counties of Finnmark, Troms and Nordland, including a defined responsibility for healthcare services for the Indigenous population.

8. S. Hangaslammi and I. Hatakka. *Red Cross Arctic Disaster Management Study*. Finnish Red Cross, 2018.

2. Understanding health preparedness in the Arctic region – challenges and opportunities

The Arctic region is characterised by vast distances, harsh weather conditions, sparse populations, and limited resources, whilst being subject to increased geopolitical and economic interests, largely fuelled by the effects of climate change and Arctic amplification. These environmental, economic, geographical and social drivers are interconnected and challenge health preparedness in the Arctic region. Yet, local communities reveal important insights into what constitutes health preparedness, which can be harnessed to strengthen health preparedness across the Arctic region.

This chapter presents the combined findings of the two components of the Arctic Health Preparedness Project: the Arctic Health Preparedness Conference, and the Photovoice study. The former identified four challenges and four opportunities for strengthened health preparedness: climate change, logistics, resources and geopolitical tensions were challenges, and community resilience and local capacity building; collaboration and partnerships; innovation and one health; and policy development and governance represented opportunities for strengthening health preparedness. These themes largely overlap with the findings from the Photovoice study.

Through their participation in the project, volunteers captured their lived experiences of health preparedness in the Arctic and

conducted a thematic analysis of their own photographs. They identified six themes: *'Self-preparedness in minus 30 degrees'*, *'In all types of weather'*, *'Opportunities in winterland'*, *'Vulnerable volunteering'*, *'Collaboration provides security'*, and *'The joy of being present'*. These themes illustrate how preparedness is not only about physical and practical preparation; it is also about building and maintaining relationships, identity, and the pride associated with being a resource for the local community.

These interconnected themes are explored in the following sub-chapters: *A changing landscape*; *Distances and Arctic climate*; *Resource scarcity*; *Collaboration*; and *Community resilience and self-preparedness*. Throughout we share case examples of civil society and health authority collaboration for strengthening health preparedness, emphasising the perspectives of local Arctic communities and a holistic view of health preparedness.

A changing landscape

Climate change

The climate in the Arctic region is changing fast. Warming is happening three to four times faster in the Arctic than the global average, and the number of extreme weather events is increasing.⁹ The Arctic is becoming warmer, wetter and the weather is becoming more extreme, with huge implications for local Arctic communities, as well as the world. The

9. AMAP. 2025. Key Findings from the AMAP Arctic Climate Change Update 2024. Version April 4th 2025. Available from: <https://www.amap.no/work-area/document/3841> Accessed 01.05.2025.



Photograph from the Photovoice study themed 'In all types of weather'.
© Gabriella Jurisic Ottesen | Norwegian Red Cross

warming leads to permafrost thaw, sea ice loss, coastal erosion, torrential rain, avalanches, wildland fires, and other extreme weather events increasing the frequency of natural disasters.

These climate-related challenges and risks have an impact on the environment and ecosystems, but also on the local communities and their health preparedness and response capabilities. Thawing permafrost damages infrastructure and releases contaminants like mercury and PFAS, posing long-term health risks to wildlife and humans, which adds to the disease burden faced by the health services in the future, and disrupts food systems today. But ecosystem change is also a major driver of disease emergence: permafrost thawing and warming temperatures can cause release and re-emergence of ancient pathogens, spread of zoonotic diseases and vector-borne illnesses.¹⁰

The mental health impacts of climate change are disproportionately affecting Indigenous Peoples in the Arctic, whose connection to the land is deeply interlinked with wellbeing. Climate change is disrupting traditional livelihoods, physical access to the land and challenging the relevance of traditional knowledge being passed down as the environment is rapidly changing.¹¹⁻¹² Individual and community resilience is being worn down by climate induced stress, grief and worry for the future.

In addition to disrupting already fragile ecosystems, the increased wildfires, heavy rainfall and flooding strain emergency response systems and may require large scale emergency response, including mass evacuations when occurring in populated areas.

10. J. Berner, S. Jore, K. Abass and A. Rautio. (2024). One health in the Arctic – connections and actions. *International Journal of Circumpolar Health*, 83(1). <https://doi.org/10.1080/22423982.2024.2361544>.

11. J. Middleton et al 2020 Indigenous mental health in a changing climate: a systematic scoping review of the global literature *Environ. Res. Lett.* 15 053001 DOI:[10.1088/1748-9326/ab68a9](https://doi.org/10.1088/1748-9326/ab68a9).

12. L. Lebel, V. Paquin, T.A. Kenny et al. Climate change and Indigenous mental health in the Circumpolar North: A systematic review to inform clinical practice. *Transcultural Psychiatry*. 2022;59(3):312-336. DOI:[10.1177/13634615211066698](https://doi.org/10.1177/13634615211066698).



Canada: Climate Hub

Based on its experience with Emergency Response Units, Canadian Red Cross has developed an innovative ***Climate Hub***, which is a physical site transformed from existing equipment that provides support in the event of extreme heat, cold, wildfire smoke, or other adverse air-quality events. The Climate Hub design can provide shelter, added capacity, and the flexibility to offer tailored services to meet the needs of the community.

The Climate Hub continues to be developed, with the procurement of additional items to strengthen its capacity currently ongoing. Specialised tents with heating, cooling, and High Efficiency Particulate Air (HEPA) filtration capacity can provide heating and cooling and can reduce levels of wildfire smoke particles inside the tent. HEPA filtration can create a positive pressure tent to prevent airborne microorganisms from entering the tent and maintain clean air inside the tent to help individuals (including those with respiratory conditions and other illnesses) breathe clean air.

This equipment is designed to be adaptable, agile, and modular, with the ability to be deployed around the country. The Climate Hub allows for the provision of tailored services with partners, utilising the hub as a convening site. It can also be deployed for recovery operations following the relief period.

- ***HEPA filtration*** removes airborne contaminants such as wildfire smoke particles to improve indoor air quality and creates a clean air environment inside emergency response tents.
- ***Positive pressure room:*** Maintains higher air pressure inside than outside, forcing clean, filtered air out and preventing contaminants from entering.
- ***A positive pressure room + HEPA filtration*** helps protect individuals with respiratory conditions from poor air quality due to wildfire smoke.



Aftermath of a forest fire. Yellowknife, Northwest Territories, Canada Photo: Getty Images

Norway: Information and Support Centre (Evakuerte- og pårørendesenter (EPS))

In Norway, Information and Support Centres are temporarily established centres following a crisis or evacuation situation, for example after a maritime accident, fire or during extreme weather situations. At the Information and Support Centre, persons who have been affected by a crisis or emergency (e.g. evacuees) receive necessary help, psychosocial support and information, and are reunited with their relatives and loved ones. The police have the legal authority to establish an Information and Support Centre. The municipality is responsible for setting up and running the centre, and can request assistance from volunteers from organisations such as the Red Cross.

Several of the Norwegian Red Cross' local branches have formalised agreements with their municipalities stipulating that the Red Cross will support the municipality in establishing and running Information and Support Centres. Volunteers are frequently asked to support staff at the Information and Support Centres with logistics, administrative tasks, registration of evacuees, and with the distribution of food, drinks and blankets. Trained volunteers also assist with treating minor injuries, transportation to hospital, and provide psychosocial support to evacuees.

Local branches of the Norwegian Red Cross have contributed to setting up and running many Information and Support Centres. Recent examples include supporting Information and Support Centres established after a train accident in Nordland in 2024; the landslide that claimed 10 lives in Gjerdrum in 2020; and after the Viking Sky cruise ship incident in Hustadvika in 2019. Local Red Cross branches are frequently engaged in exercises with their local municipalities and emergency responders to train and maintain their role in supporting Information and Support Centres.



Photograph from the Photovoice study themed 'Vulnerable volunteering'. © Judith Fjeldberg | Norwegian Red Cross

Economic and geopolitical drivers

Climate change is effectively opening the Arctic for new economic and geopolitical interests. Recent years have seen a rise in geopolitical tensions, driven by the region's strategic location. As political divisions deepen and confidence in multilateral institutions declines, collaborative efforts to address shared Arctic challenges, such as climate-related health impacts, cross-border healthcare provision, and coordinated search and rescue operations, face increasing obstacles.¹³ Simultaneously, the rise in economic activities, including maritime traffic and tourism, elevates the risk of accidents and places additional demands on already limited local emergency response capabilities.

Tourism, and cruise tourism in particular, are drivers of climate change. Tourism in the Arctic has increased massively in recent years. It is not evenly distributed in the region

but varies greatly in both type and impact. Common for all types of tourism is that human presence puts pressure on the ecosystem and infrastructure, and visitors often lack local know-how and understanding of local conditions, which can cause risk situations and accidents.¹⁴ These challenges are well described in the *Red Cross Arctic Disaster Management Study*.¹⁵

Cruise ship accidents in Arctic waters pose significant challenges for rescue operations due to harsh conditions and limited resources. Mass rescue operations are rare, but even the influx of tourists at cruise ship scale in the Arctic impacts local communities and may put a strain on existing health care services, which are not dimensioned for such an increase in temporary populations. However, as part of the ecosystem operating in the Arctic, cruise operators also represent additional resources in the region.

The private sector as a resource – cruise operators in the Arctic

The Association of Arctic Expedition Cruise Operators (AECO) has 80 international members and 60 vessels. To promote sustainable and responsible cruise tourism in the Arctic, AECO members conduct community visits in the Arctic and aim to contribute to local economies. Members must adhere to strict guidelines on community interaction and environmental protection. AECO also participates in exercises to enhance emergency response. Expedition cruise vessels are often equipped with tools and personnel to handle emergencies and have health personnel on board that can provide healthcare services to their passengers and assist in emergencies. As cruise tourism in the Arctic continues to increase, it is vital that cruise operators also have capacities and resources available to assist in emergencies in the Arctic. To leverage these capabilities, more knowledge about both risks associated with maritime traffic in the Arctic and how cruise operators can provide assistance in emergency settings, is key.

13. H. E. Austerheim, E. Ikonen, R. Elvegård, and N. Andreassen. *Arctic Health Preparedness Conference Report*. Norwegian Red Cross, 2025.

14. S. Hangaslammi and I. Hatakka. *Red Cross Arctic Disaster Management Study*. Finnish Red Cross, 2018.

15. S. Hangaslammi and I. Hatakka. *Red Cross Arctic Disaster Management Study*. Finnish Red Cross, 2018.

Svalbard Response Concept: Large-Scale Emergencies

As described in the Red Cross Arctic Disaster Management Study, Svalbard has developed a response concept for maritime incidents based on extensive collaboration between the Governor of Svalbard and Longyearbyen Red Cross Search and Rescue Corps.¹⁶ The scenario they prepare for is cruise ship incidents requiring evacuation of passengers to land. Due to vast distances and flying time, evacuation needs to happen to the closest shore, where the priority is to quickly provide shelter and heat, as well as basic first aid.

Transport capacity is very limited, with one or two helicopters, and shelter from the Arctic environment takes priority over number of rescuers. The concept thus relies on utilising fit and well passengers and crew to support the rescue operation. Equipment consists of inflatable tents for shelter and drop bags for heat and care (bivvy bags, sleeping mats, water, chemically heated blankets, first aid kits, and water) which can be dropped by plane or helicopter.

Joint trainings and testing in real environment have been crucial for learning and development of the response concept, but some key questions remain:

- With cruise ships accommodating up to 5,000 people, what level of capacity should Svalbard maintain, with its limited human resources?
- What exercises are needed to maintain the technical know-how and knowledge of the equipment that is to be used?
- What risk assessments must be done to ensure the safety of emergency responders and trained volunteers?
- Who should pay for maintaining this capacity in a long-term perspective?

Operational models from international mechanisms such as the Red Cross Emergency Response Unit (ERU) concept can offer critical insights for structuring, scaling, and sustaining a robust volunteer-based competency and capacity framework to support rapid response readiness. The logistical, financial, and operational strategies employed to maintain and deploy ERU teams and materials can inform and strengthen the implementation of the Svalbard Response Concept for maritime incident preparedness and response.

16. S. Hangaslammi and I. Hatakka. *Red Cross Arctic Disaster Management Study*. Finnish Red Cross, 2018.

The societal changes from traditional livelihoods to tourism and economic industries impact local communities and the mental health of the population. For Indigenous Peoples, the land is central to cultural identity, existence, and traditional livelihoods. But the terrestrial and marine areas of the Arctic are changing rapidly, pressured by climate change and industrial developments such as wind farms, commercial fisheries and aquaculture, mining, and infrastructure. These transformations contribute to environmental degradation and disrupt longstanding cultural practices, including reindeer herding, challenging the continuity of Indigenous ways of life.¹⁷

Demography

The general trend in the Arctic Region, as in many parts of Europe and the Russian Federation, is an ageing population.¹⁸ The demographic trend of young people moving south or to urban environments for education and work is also impacting health preparedness. There are more people requiring complex health services as they age, fewer people to staff health care services, and fewer people available to volunteer for local community organisations. The elderly population is more vulnerable to the effects of distances and lack of infrastructure in the Arctic, especially as centralisation leads to closure of services such as banks, post offices, and pharmacies, and the distance to specialist health services is not only far, but transportation options are limited if you are not able to drive your own car.¹⁹ The permanent population is declining, whilst

the number of visitors is increasing: some areas in the Arctic are subject to increased cruise tourism, and other areas experience an increase in extreme sports and skiing tourism. These both add pressure to required health services and search and rescue capacity in the region.

There are large knowledge gaps that exist in understanding the health needs and health disparities among Arctic Indigenous and non-Indigenous Peoples.²⁰ Article 24 of the United Nations Declaration on the Rights of Indigenous Peoples states that ‘Indigenous Peoples have an equal right to the enjoyment of the highest attainable standard of physical and mental health, and that states shall take the necessary steps to achieve realisation of this right.’²¹ Logistical constraints in the Arctic challenge health service delivery, but Indigenous communities also require (emergency) health services that are culturally appropriate and respectful of traditional knowledge and practices.

In Canada, Canadian Red Cross (CRC) partnered with local health authorities in Eeyou Istchee territory to strengthen local emergency response capabilities. In Norway, the Sámi Clinic Sámi Klinihkka provides specialist health services to the Sámi people in Norway, Sweden, and Finland through collaboration agreements. However, it faces legal challenges due to the lack of cross-border recognition of health worker authorisations, as the Sámi regions do not align with national borders.

17. H. E. Austerheim, E. Ikonen, R. Elvegård, and N. Andreassen. *Arctic Health Preparedness Conference Report*. Norwegian Red Cross, 2025.

18. The Arctic Demography Index

<https://arctic-council.org/news/following-the-tracks-of-snowbirds-the-arctic-demography-index/> [accessed June 2025].

19. J. S. Anderssen and T. Gjernes (2021) *Aldring i et samisk samfunn*. Septentrio Reports, no. 5 (April). <https://doi.org/10.7557/7.5777>.

20. T. Kue Young, Ann Ragnhild Broderstad, Yury A. Sumarokov & Peter Bjerregaard (2020) Disparities amidst plenty: a health portrait of Indigenous peoples in circumpolar regions. *International Journal of Circumpolar Health*. 79:1, 1805254, DOI: 10.1080/22423982.2020.1805254.

21. United Nations. Declaration on the Rights of Indigenous People. Adopted by the General Assembly, 13 September, 2007. <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html>.

Eeyou Istchee territory, Canada:

A Mobile Hospital to Strengthen Local Emergency Response Capabilities

The Canadian Red Cross supports the Cree Health Board and the nine communities it serves in developing a non-surgical mobile hospital capable of operating in Arctic and sub-Arctic conditions. In return, the Cree Health Board shares its knowledge to help understand the climate and northern lands, to honour the territory, population, and culture of the Cree people. The project aims to improve access to healthcare during emergencies while integrating approaches that respect the cultural and logistical realities of these northern territories. It is not about improving access to care in normal times, but about effectively meeting critical needs in case of emergencies.

The initiative is led by the Cree Health Board to establish a mobile hospital, designed to meet the specific needs of the communities in the Eeyou Istchee territory in emergency situations. This partnership reflects their leadership and vision to strengthen response capabilities in their region.

The Canadian Red Cross has extensive experience in deploying mobile hospitals and clinics internationally and in Canada, experience supporting Indigenous communities during emergencies, and a strong desire to partner with Indigenous communities within the CRCS's Indigenous Peoples Framework.

Kárásjohka (Karasjok), Norway:

Specialist health services through Sámi Klinihkka

Sámi Klinihkka combines somatic services and mental health and substance abuse services in a clinic in Karasjok, with departments spread across the country through SANKS, the Sami National Competence Service for Mental Health and Substance Abuse, represented in many parts of Norway. The national team in SANKS is present in Hamarøy, Narvik, Snåsa, Røros, and Oslo.

Sámi Klinihkka has had formal cooperation agreements with Sweden and Finland since 2007. These cover the Sami areas in the respective countries. The financial aspects are regulated and invoiced according to formal price lists in the agreement. There is also a dedicated committee in the Sami Parliament working on cross-border obstacles in Sápmi.

The issue is that Sámi Klinihkka can receive patients from its entire catchment area but cannot send out teams to provide support outside Norway, as Norwegian teams with Norwegian healthcare providers are not authorised to provide healthcare services abroad. This complicates the work, for example, in incidents requiring acute psychiatric care in a local community, where Norwegian teams are not allowed to provide treatment outside Norway, even if the incident occurs within the Sami catchment area.

Distances and Arctic climate



'But it is so far, and it is so cold'

Red Cross volunteer, Sør-Varanger, Norway

Relative isolation and long distances were often described as defining, and even valued, aspects of life in Finnmark during the Photovoice study. This isolation tended to possess a dual nature when exploring health preparedness amongst volunteers in Northern Norway. On one hand, volunteers associated the vast landscape with a sense of freedom, calm, and mental space. One volunteer reflected: *'There's something about the calm you get, by [...] that road [...] it never ends. You can think complete thoughts.'*

The endless roads and the return of the sun after the polar night period symbolised hope, renewal, and psychological resilience. These physical and seasonal features of the Arctic landscape were not merely geographical or climatic realities, they were interwoven with volunteers' sense of wellbeing and identity.

On the other hand, this remoteness presents challenges for emergency preparedness and response. Volunteers noted that the vast distances could significantly delay response times and increase the complexity of operations. One participant highlighted this duality: *'It [the distance] is a positive thing, in a way – like when we experience it personally, for ourselves. But it's not so positive when we're called out, because it's such a long way to where the incident has happened.'* This tension between personal appreciation for solitude and the logistical strain it places on emergency response was a recurring theme in the discussions.

Remote Arctic communities face significant challenges in accessing healthcare and emergency services due to vast distances, limited infrastructure, and harsh environmental conditions that can cause temporary isolation.²² At the Arctic Health Preparedness Conference, speakers emphasised that these geographic and logistical barriers severely impact the delivery of acute medical care and adds to the resource burden of the health care system, as air ambulances are often required to transport patients. Furthermore, unreliable communication networks in some remote areas can hinder emergency coordination.²³

Yet, local preparedness organisations operate across the Arctic, with local responders being the first on the scene. 'Bad weather' is not a new phenomenon to the volunteers of Sør-Varanger Red Cross. *'We're not called out on the sunny days, but on days with crap weather'*, a volunteer stated as they were discussing the implications of Arctic weather and climate, especially for search and rescue missions. The Search and Rescue Corps are most often needed when the weather is bad, that's usually when people need rescue or assistance, and what the corps train for. The climate and weather conditions can make operations physically very challenging; carrying a stretcher or patient in deep snow in the dark becomes heavy very quickly.

Volunteers showed pride in their ability to respond 'in all types of weather'. They attributed this capacity to their local know-how and experience in navigating challenging weather conditions. Police officers stationed in northern Norway are often from other areas and lack this experience, they explained.

22. H. E. Austerheim, E. Ikonen, R. Elvegård, and N. Andreassen. *Arctic Health Preparedness Conference Report*. Norwegian Red Cross, 2025.

23. H. E. Austerheim, E. Ikonen, R. Elvegård, and N. Andreassen. *Arctic Health Preparedness Conference Report*. Norwegian Red Cross, 2025.



Photo: Photograph from the Photovoice study themed 'In all types of weather'.
© Sandra Asmyhr | Norwegian Red Cross

These experiences echo those presented at the Arctic Health Preparedness Conference. Responding to health emergencies, incidents, and accidents in the Arctic region poses unique challenges related to climate and weather. The Polar winter brings extended periods of darkness, along with harsh and unpredictable weather conditions such as heavy snowfall and storms, which can make transportation and logistics difficult, isolating communities and hindering emergency response.

Volunteers demonstrated a sense of accomplishment derived from the hardship

of volunteering in the Arctic, but they also expressed concern about the implications of Arctic weather. As one volunteer stated: *'We've always lived with the weather – it's always been bad, but it's the logistics: how do we get to the hospital?'*

The unpredictability and lack of appropriate infrastructure or logistical means to overcome the harsh Arctic conditions means that innovative solutions are required to deliver emergency health services.

Blood Preparedness and walking blood banks

Norway: Walking blood bank: A pilot project for blood preparedness in remote areas.

A walking blood bank is a system for emergency collection of whole blood from donors to treat patients with life-threatening bleeding. The project aims to improve blood preparedness in Northern Norway, where only two blood banks have all blood products, and extreme weather can delay blood transport.

A walking blood bank collects blood on-site during emergencies, a practice common in the military but unique in civilian crisis settings. The project involves recruiting type O blood donors, developing standard operating procedures, training personnel, and ensuring regulatory approval and supervision. So far, four walking blood banks have been established, with a fifth pending. There have been 15 live activations, with an average response time of 30 minutes or less. Over 60 personnel have been trained, and more than 100 emergency blood donors have been recruited. The project has shown that walking blood banks can provide better early treatment in remote areas.

Finland: Blood services are managed entirely by the Finnish Red Cross, which is mandated to manage blood services under both normal and exceptional circumstances. The Finnish Red Cross Blood Service plan to establish walking blood banks and have considered incorporating them into the Finnish Red Cross' Emergency Response Units (ERUs), allowing walking blood bank training to be included in larger training exercises.

The recruitment of local blood donors and the set-up of walking blood banks offer opportunities for engaging local resources and personnel, including those from civil society, in supporting health personnel operating the walking blood bank. Volunteers, either organised through volunteer organisations such as the Red Cross, or unorganised members from the local community, can potentially assist as donors and/or with logistical and administrative tasks. Such assistance can free up time for health personnel to carry out and oversee blood collections.

However, questions remain regarding how support from civil society can be effectively integrated and planned for in practice. Barriers to leveraging such support may include national legislation, insurance coverage for volunteers, and responsibilities for recruitment and training. These issues should be further examined to assess how civil society can best support emergency blood collection and donation of blood during crisis.

Acute helper-project: Organised volunteers acting as emergency responders.

Norway: With the vast distances and the scarcity of resources that characterise much of the Arctic region, having local resources trained in basic first aid can be vital for saving lives. Ensuring that volunteers and people living in Arctic communities have access to first aid training is therefore vital. In Norway, the *Acute Helper* project was initiated by the Norwegian Directorate of Health as a pilot project to train organised volunteers as local emergency responders. The main idea of the project is that locally available first responders can provide lifesaving first aid when professional emergency responders are not available, or where distances or harsh weather conditions mean that assistance is too far away.

Under the *Acute Helper* project, local personnel, mostly from fire departments across Norway, have been trained to provide assistance in instances of heart failure, loss of consciousness, major external bleeding and hypothermia. More than 8 000 firefighters from over 330 fire departments have been trained as acute helpers since 2010. From 2018-2023, a pilot project financed by the Norwegian Directorate of Health and implemented by the Norwegian People's Aid further expanded the concept to train volunteers in Norwegian rescue and preparedness organisations as acute helpers. Volunteers from the Norwegian Red Cross and the Norwegian People's Aid that participated in the project have gained skills that supplement the first aid training and knowledge these organised volunteers already had. The pilot project ended in 2023. The Norwegian People's Aid recommended continuing the concept and training more volunteers from rescue and preparedness organisations.

Resource scarcity



'It's about the fact that we're in the North, and there really are too few of us'

Red Cross volunteer, Sør-Varanger, Norway

Remote and sparsely populated communities often lack resources to sustain healthcare services. They face a shortage of trained health care staff, inadequate equipment, and insufficient emergency response capabilities. Volunteer-based search and rescue (SAR) teams struggle with recruitment, retention and provision of appropriate mental health support. Limited access combined with a need for culturally sensitive care further complicate health preparedness.²⁴

The sparse population in the Arctic region was mirrored by a shortage of active volunteers in Sør-Varanger Red Cross, making them vulnerable as a preparedness organisation. The lack of volunteers often meant that the workload was too heavy for those volunteers who were available, leaving them feeling overwhelmed and unsupported. As one volunteer expressed, *'It's about the fact that we're in the North, and there really are too few of us. Up here in the North, we miss having a few more people to rely on.'*

Volunteers feared that they might not be able to contribute to search and rescue missions when requested, as their ability to respond was limited by the shortage of volunteers. One volunteer conveyed this feeling of vulnerability: *'I think it's our everyday reality,*

and that's what I struggle with. We're trying to run a Search and Rescue Corps with just two or three people showing up.' Another volunteer joined in: *'It makes us very vulnerable, especially when it comes to winter preparedness. You have fewer people to rely on. If it's just two of us going out, there's a real risk that we might not be able to respond because safety is compromised.'* This uncertainty led to concerns that the public might not view them as reliable if they were unable to respond to a call, and that they would fail to meet the public and the authorities' expectations: *'Sometimes we can't respond, because we don't have enough volunteers. We are reliable, but there will be times when we simply can't show up.'*

The Photovoice study revealed the vulnerabilities of volunteer-based preparedness systems, particularly in sparsely populated and remote regions, where limited human resources and lack of external recognition can threaten operational reliability and morale. In larger emergencies, boosting existing healthcare capacity with external, temporary resources may be required to ensure healthcare to the affected population.

Emergency Response Units (ERUs), created by the IFRC in 1994, are a key part of the Red Cross' global surge mechanism, designed to deploy the right people and services to the right place at the right time, locally when possible, internationally when necessary. When an emergency occurs, the local Red Cross Society assesses the situation and, if unable to respond alone, requests support from IFRC headquarters in Geneva.

24. H. E. Austerheim, E. Ikonen, R. Elvegård, and N. Andreassen. *Arctic Health Preparedness Conference Report*. Norwegian Red Cross, 2025.

Red Cross Red Crescent Emergency Response Units (ERUs)

ERUs are specialised teams with standardised equipment for humanitarian response. They are self-sufficient for one month and able to operate for up to four months, providing technical support that allows affected Red Cross and Red Crescent National Societies (NS) to focus on coordination. Deploying NSs fund the mission, with personnel rotating every four to six weeks and a handover is required after four months. If needs persist, services may transition to the IFRC, the host NS, or other actors.²⁵

The ERUs range from emergency health services (Emergency Clinic, Emergency Field Hospital, Mobile Clinics, Public Health Teams), to Water and Sanitation, Base Camp, IT and telecom. The configurable modules, typically consisting of a roster of deployable surge staff, equipment, tools and training, are maintained by Red Cross and Red Crescent National Societies and real-time readiness statements can be accessed through IFRC. The health services are aligned with WHO EMT classifications and its emergency medical services is defined after each configuration. For example, the emergency field hospital can provide 24/7 clinical care for 100–200 outpatients daily and houses up to 100 inpatients. It includes one operating theatre capable of performing up to seven major or 15 minor surgeries each day, with sufficient supplies for one month before resupply is required.²⁶

Six of the Red Cross National Societies in the Arctic region hold ERU capacities, which includes emergency clinics, emergency hospitals, public health teams specialised in epidemic and pandemic response, and specialised water and sanitation teams and equipment, that could be relevant for Arctic emergency response. The *Arctic Disaster Management Study* assessed this capacity and recommended that the Red Cross ensures that ERUs are also capable of operating in Arctic cold conditions.²⁷

This surge capacity has also been utilised in response to Arctic emergencies. In response to Wildland fires in 2023, Canadian Red Cross (CRC) deployed multiple nurses to support Indigenous northern communities, where the population had nearly tripled due to the full evacuation of Fox Lake in summer 2023. CRC nurses took on the role of Community Health Nurse, working alongside Indigenous Services Canada employees as the community was slowly being rebuilt.

25. International Federation of Red Cross / Red Crescent (© IFRC 2025 v7.18.1), 'Catalogue of Health Surge Services', (weblink): <https://go.ifrc.org/surge/catalogue/health>.

26. Norwegian Red Cross (2022), 'Handbook for the Norwegian Red Cross staff and delegates', Emergency Hospital and Emergency Clinic Handbook, (weblink): [Handbook Catalogue - Handbook](#).

27. S. Hangaslammi and I. Hatakka. *Red Cross Arctic Disaster Management Study*. Finnish Red Cross, 2018.

Collaboration



'We create something – relationships.'

Red Cross volunteer, Sør-Varanger, Norway

Resource scarcity demands effective utilisation of all resources when preparing for and responding to emergencies in the region. During the COVID-19 pandemic, substantial and lasting pressure on health service providers led to requests to the Red Cross to take on additional operational assignments such as patient transport, testing and support at vaccination centres, and assistance with delivery of medicines to people's homes to relieve the health services; a form of task shifting from health care personnel to volunteers.²⁸ In resource-scarce settings, task shifting may be crucial to enable the health sector to deal with both acute and protracted emergencies.

For the Norwegian Search and Rescue (SAR) Service, voluntary organisations are a core part and SAR services are performed through cooperative efforts involving government agencies, voluntary organisations and private enterprises.²⁹ However, there is limited experience and collaboration among the health services and volunteer organisation beyond specific tasks and activities. To be operational in an emergency and enable task shifting and -sharing effectively, it will be required to foster relationships and explore partnerships to identify tasks and initiate joint trainings during non-crisis periods.

Additionally, as explored in the research project *The Future of Volunteers in Disaster Preparedness and Emergency Response* such

shifting of responsibilities from public authorities to the voluntary sector, raises critical questions about the capacity, mandate, and duty of care of volunteer organisations, and it cannot be assumed that the volunteer sector will always be able or willing to take on these expanded roles.³⁰

In Sør-Varanger, collaboration with other preparedness actors was seen as essential in fostering trust and security. Trust was developed during normal times through training and exercises, supporting each other's trainings or certifications, and informal cooperation between organisations. These interactions allowed volunteers to build relationships, gain familiarity with each other's roles, and develop confidence in working together. One volunteer explained:



'It's important to get to know each other across organisations during 'peacetime', or whatever you want to call it. When things are calm. Then it becomes much easier to collaborate when the storm hits. If you've met, talked, and maybe know each other a little, that really helps. So, I think that's an important part of preparedness.'

Red Cross Volunteer, Sør-Varanger, Norway

At the same time, volunteers felt that visible collaboration between multiple local actors, such as the Red Cross, Norwegian Rescue dogs, and the local police, also enhanced public safety and overall preparedness capacity. In this way, collaboration built during everyday interactions not only strengthened operational effectiveness but also contributed to a more resilient and secure society.

28. Norwegian Red Cross (2023) *The Future of Volunteers in Disaster Preparedness and Emergency Response* (English translation of *Fremtidens frivillige beredskap*) (Report) Oslo: Red Cross.

29. The Joint Rescue Coordination Centres. English. Available from: <https://www.hovedredningsentralen.no/english/> accessed 2 May 2025.

30. Norwegian Red Cross (2023) *The Future of Volunteers in Disaster Preparedness and Emergency Response* (English translation of *Fremtidens frivillige beredskap*) (Report) Oslo: Red Cross.



Photograph from the Photovoice study themed 'Collaboration provides security'.
© Judith Fjeldberg | Norwegian Red Cross

Cross-border cooperation in emergency and ambulance services with the northern health regions of Sweden, Finland and Norway has existed for years. This is a regional initiative between the regions of Västerbotten and Norrbotten in Sweden, Lapland and Northern Ostrobothnia in Finland, and the NNRHA (HelseNord) in Norway. The purpose of the agreement is to improve the availability of prehospital services for residents and visitors in border areas. The resources covered by the agreements include staffed ground and air ambulances, as well as other prehospital services. There are also procedures for cooperation and interaction between emergency medical dispatch centres (AMK) in the respective countries. This cooperation is, as mentioned, a regional initiative, but should be anchored and implemented at a national level to ensure access to prehospital resources in border areas nationwide. Additionally, this work is hindered by legal obstacles, such as ambulances being unable to bring a Norwegian on call doctor on missions across the border, since the out of hours medical service does not have the authority to operate outside national borders, as their authorisation is not valid beyond the border.

Self-preparedness and community resilience



'No one is coming.'

Red Cross volunteer, Sør-Varanger, Norway

Distances, harsh weather conditions and limited resources makes self-reliance and self-preparedness important strategies for Arctic communities. In the Arctic context, volunteers explained, self-preparedness goes beyond national guidelines and is an integral part of daily precautions. The harsh Arctic environment and vast distances create a need for resilience and builds a culture of self-

reliance which influences everyday decision and action, such as routine visits to family members in the neighbouring municipality. One volunteer reflected that the long distances, cold temperatures and few people on the road means that if the car breaks down one needs to be prepared. *'A long way in every direction - it builds a [...] what's it called, resilience, and inner strength in us too'*. They must rely on themselves and their own capacity to deal with any situation that may occur, which is experience-based knowledge gained from living in the Arctic environment.

Self-preparedness, or personal emergency preparedness, refers to actions taken by individuals or communities, and has emerged as a core component of local, regional and national preparedness plans in European countries and in other contexts. Typically, the national recommendations on self-preparedness and emergency planning detail what the public (individuals, organisations, local communities) should ensure to have available in terms of personal preparedness kits in the household or in the local community to be self-sufficient for up to several days, like alternative means of heating and communication, long lasting foods, first aid equipment, safely stored drinking water and communication tools to access information.

In line with the Norwegian government's recommendations, the Norwegian Red Cross has developed a self-preparedness workshop, inspired by the Australian Red Cross' work, which in addition to physical and practical preparedness planning, considers relational and psychological preparedness for crises. If enough people ensure that they are prepared to be self-sufficient for up to several days in crisis situations, the authorities can prioritise their resources to those who are most vulnerable and in need of support – e.g. elderly community members who frequently require health and care services. Governments in Norway, Sweden, Denmark, Iceland and Finland have all issued, or are planning to issue, guidelines and recommendations to the public about how they can ensure a robust self-preparedness.

Volunteers described how they were used to being self-sufficient and not waiting for ‘someone’ to come and fix a situation. Due to the distances and relative isolation, one volunteer stated:

‘We’re not sitting around waiting for ‘someone’ to take responsibility, we handle it ourselves. We’re used to managing on our own; we know who to call, who has a trailer or a snowmobile – everyone just knows.’

Red Cross volunteer, Sør-Varanger, Norway

The sense of isolation and culture of self-reliance builds a proud identity, which appears to reinforce the sentiment of being a community of proactive and responsible individuals, with a lot of collective resources to deal with a situation or a crisis. In discussions, the concepts of self-reliance and self-preparedness were thus strongly linked to the collective identity as a ‘Finnmarking’. Whilst individual preparedness was needed, the shared resources and solidarity towards their community members was of equal importance for everyone’s safety. Coping with the environment was seen as prerequisite for thriving in the Arctic.

During the Arctic Health Preparedness Conference several speakers emphasized the need to integrate Indigenous traditional ecological and health knowledge into emergency preparedness plans. This could contribute to community engagement, foster sustainable practices for long-term resilience, and help Arctic communities emerge stronger and better prepared.³¹ The experience from Canada shared at the conference highlights that while Indigenous communities faced disproportionate challenges due to existing inequities and unique cultural contexts during the COVID-19 pandemic, their resilience, grounded in community solidarity, self-governance, and traditional knowledge, provided effective strategies for response.

Training laypeople and volunteers was also highlighted as essential, especially in remote regions where they often serve as first responders. Successful models, such as the Canadian Red Cross partnerships with remote communities and Norway’s ‘Acute helpers’, show how structured training can enhance emergency response capacity. Investing in first aid, mental health, and emergency skills training would further strengthen local preparedness.



Supporting volunteer rescuers

Volunteers that contribute to search and rescue missions or crisis response are often faced with chaotic situation, lack of information, long hours, uncertainty and potential high risk. In addition: not all missions end well. Such experiences may place significant emotional strain on volunteer responders. Many volunteers have faced adversity and struggled with feelings of stress, uncertainty, guilt or inadequacy in the aftermath of a mission.

Several characteristics of the Arctic region can add to the need for psychosocial support for volunteer responders. Remote areas where the assistance take longer to reach can result in volunteers and local residents having to lead the rescue operation during the most serious part and for a longer time. They may also operate under higher risk. Furthermore, likelihood that the volunteers are searching for or providing help to someone they know personally is higher in small communities. This puts an extra emotional strain on the helpers.

The Red Cross Red Crescent movement is placing a greater focus on psychosocial support for its volunteers and staff. The Norwegian Red Cross has developed a structured program for emotional debrief that is offered all volunteers and staff that have experienced challenging incidents. A team leader for the Search and Rescue Corps at the Norwegian Red Cross, Alta branch describes her experience with the program:

‘After the search, I felt that we had directed some of the personnel in the wrong direction. I felt that I wasn’t competent enough to carry out such a task and blamed myself. I had lost my motivation and was on my way out of the organisation. However, one of the operation leaders recognized that I needed psychosocial support. Thanks to the emotional debrief that was offered afterward, I received help in seeing the bigger picture – that there were many elements and causes that contributed to the fact that we didn’t make a discovery that day. Because of that conversation, I decided to focus on improving my skills and regained my drive for the work.’

While organised volunteers may benefit from structured support mechanisms, unorganised volunteers often lack access to such support. Locals with knowledge of the area where a search is conducted can be engaged as guides, or neighbours may take part digging out houses that have been buried due to avalanches or landslides. These unorganized, local volunteers often do not have the training and are not mentally prepared for the situation they might have to face. Which again may increase the emotional stress and need for psychosocial support.

Ensuring adequate psychosocial support for organized and unorganized volunteers before, during and after emergency response is of vital importance for the mental wellbeing and resilience of volunteer first responders, and should be integrated into preparedness agreements, preparedness plans and training exercises.

During the Photovoice study, volunteers expressed overwhelm at the thought of the polycrisis potential in the Arctic region, fuelled by climate change. Participation in international conferences confronted volunteers with a gloomy picture of the Arctic future, but they were quick to realise their own role in the response and found individual purpose in contributing to the community's collective resilience.

■ *'We have knowledge of how vulnerable things can be, how incredibly small the margin can sometimes be, that lives may be lost [...] And that's the case in this whole health preparedness [...] with this conference too. They list up how bad things are, and it kind of hits us in the face. Like, if you just sit and listen, the message is: [...] "This can't end well, because it's already bad, and it's just getting worse and worse and worse." But then I sit there with [...] something else [...] because I'm part of something that can make a difference. I'm part of a community, I'm part of a resource, and I can contribute. In my [...] in my personal balance, that's [...] otherwise I'd just get depressed.'*

Red Cross Volunteer, Sør-Varanger, Norway

Volunteers in Sør-Varanger Red Cross hold a broad and nuanced understanding of what constitutes health preparedness. Their perspectives reflect a whole-of-society approach, that builds on resilience, self-preparedness, collaboration and the ability to identify and support those in need of care. This is only possible through local presence and knowledge, relationship building and trust, that is created through partnerships and engagement before and after emergencies. Volunteers described how community events, whether a summer picnic for residents at the asylum reception centre, or a coffee meeting with elderly residents, serves not just to

spread joy or provide support, but to build trust, mental health resilience, and social cohesion. For the Red Cross volunteers, these elements were preconditions for effective health preparedness.

■ *'It's really about that meeting place, and about [...] it's about mental health and, you know, what I said about social exclusion. Preventing that feeling of exclusion when the kids go back to school. That they, too, have experienced something – those who can't afford to go on vacation or [...] you know, to a cabin [...] but they've still had nice experiences, ones they can be proud of and talk about.'*

Red Cross Volunteer, Sør-Varanger, Norway

Being present and creating arenas for joint experiences and community was highlighted by several volunteers and stretched across all areas of society. Such activities contribute to developing social networks which can provide the necessary access and trust in times of crisis.

Psychosocial activities such as summer activities for children and being standby as first aid responders also serve a purpose for the Red Cross identity and community among volunteers, which is another prerequisite for effective preparedness, as one participant explained: *'And it's often this kind of thing [community events] that helps us get to know each other internally as well.'* Even in difficult moments, such as when a search and rescue mission ends fatally, the Red Cross volunteers find strength and meaning in doing things together: *'We create something – relationships. Being able to talk about those things afterward, when we feel safe with each other – that's so important.'* Ultimately, the theme 'the joy of being present' is not abstract. It is the joy of belonging, of mattering, and of being ready, together.



Photograph from the Photovoice study themed 'The joy of being present'.
© Judith Fjeldberg | Norwegian Red Cross

This grassroots preparedness, based on local knowledge, trust, and relationships, builds a robust society from the ground up. Through visibility and participation in the community, volunteers become known, but they also get to know *'the nooks and crannies of the municipality'*, as one described it. This mutual familiarity enhances the ability to respond effectively in crises, informed by lived insight into who might be most vulnerable and in need of support. As another volunteer put

it simply: *'Care is also preparedness. 'Local preparedness.' No, local [...] I mean, we're kind of bridge-builders too – between us and the community.'* The experience of volunteering itself was seen as meaningful, empowering, and central to community cohesion. In this way, the work of the volunteers not only supports emergency response efforts – it actively strengthens the social fabric that resilience depends on.

3. Recommendations and priorities for the future

It was beyond the scope of this pre-project to conduct a comprehensive health preparedness risk assessment for the entire Arctic region. While the report has highlighted key insights and shared lived experiences of health preparedness in Arctic communities, the diversity of the region, in terms of its peoples, geography, governance, and risk exposure, along with the limitations of this report, precludes a singular conclusion on how civil society can best contribute to strengthening health preparedness across the Arctic.

But the report sheds light on some of the pre-requisites for civil society engagement and underscores the need for this engagement. Resources are scarce, health needs are only increasing, and disasters are getting more complex. Considering the intensifying challenges in the Arctic, the full utilisation of civil society as a critical resource is

imperative. This final chapter outlines strategic recommendations based on the findings and discussions that emerged throughout the project.

The following recommendations are directed to the Arctic Council and other relevant stakeholders, with the aim of informing future collaboration and strengthening health preparedness in a manner that is culturally respectful, community-led, and adapted to Arctic realities. The recommendations directly address future preparedness needs but are no less relevant for strengthening community resilience and address today's challenges. As underscored by the Arctic Emergency Management Conference (AEMC) in Bodø, effective preparedness requires culturally competent approaches, sustained investment, and collaboration between civil society, health authorities, and Indigenous communities.³²



'Orientation trip'. Photograph from the Photovoice study themed 'Opportunities in Winterland'.
© Judith Fjeldberg | Norwegian Red Cross

32. Norwegian Chairship of the Arctic Council. 2025. *Arctic Emergency Management Conference, Responding to Emerging Challenges and Risks Conference Summary Report 2025*. Tromsø, Norway.

Better Understand the Changing Arctic and Health Preparedness Needs

The report has explored both current and emerging health threats in the region, as well as pointed to the risk of unforeseen crises in a region vulnerable to compounding risks and polycrisis. Yet, a systematic risk assessment has not been feasible within this project. The vastness of the region also emphasises its diversity in terms of health- and health preparedness needs. Arctic communities will continue to likely be the first affected and the first to respond to the health needs of their population. Their resilience, preparedness, and inclusion in decision-making processes are therefore essential.

Conduct Comprehensive Risk and Capacity Assessments

Systematic, region-specific assessments should be undertaken to identify current and emerging health threats, and the preparedness required to address them. These must integrate Indigenous and traditional knowledge to ensure strategies are culturally grounded and locally relevant. We recommend that risk and capacity assessments adopt a Whole-of-Society and One Health Approach: Preparedness strategies should reflect the interconnectedness of human, animal, and environmental health, ensuring inclusive planning across all sectors of society. Authorities and organisations must prioritize community-based health preparedness by actively engaging all sectors of society, particularly Indigenous leaders, civil society, and volunteers.

Strengthen Community Resilience and Local Preparedness Capacity

As shown throughout this report, strong local preparedness is essential for effective health emergency response. Building community resilience involves understanding local needs, strengthening local response capabilities, and supporting organisations that contribute to preparedness at the grassroots level. Indigenous participation and knowledge must be embedded in these efforts. the vital role of community preparedness and the integration of Indigenous Knowledge in emergency response. Mental health is an integral part of health preparedness, and it must include psychosocial and physical preparedness.

Build Local Knowledge and Skills

Invest in culturally appropriate training that builds local capacity in first aid, psychosocial first aid, and mental health care, alongside general crisis response skills.

Support Community-Based Organisations

Provide sustained funding and policy support to community organisations with vital roles in preparedness and emergency response. This includes support for volunteer recruitment, management, and retention. Develop mental health support systems for all responders. Ensure culturally sensitive follow-up and care for both formal and informal volunteers, and address gaps such as insurance coverage for volunteer emergency responders.

Enhance Civil Society's Role in Health Preparedness through Collaboration

Health preparedness has been the domain of the health services, whose engagement with civil society has been limited in preparedness and response to search and rescue. This report shows that civil society holds capabilities that would be very useful for the health sector in an emergency, but this requires relationship building between sectors to explore opportunities, identify tasks and to have trained and established a collaboration prior to the event. A pre-requisite is that civil society is supported to maintain capacity also during normal times.

Explore Task Shifting Opportunities

Identify specific roles that civil society actors can take on during health emergencies to relieve pressure on formal health systems, particularly in remote or underserved areas, or in longer-term crises where the health system is overwhelmed.

Conduct Capacity Mapping

Systematically assess and document the resources, skills, and potential contributions of civil society organisations to better integrate them into regional and national preparedness frameworks.

Promote Joint Trainings and Collaboration

Facilitate regular joint exercises and preparedness trainings between civil society actors and the formal health sector during non-crisis periods to build operational trust and readiness.

4. Main elements of the project

The Arctic Health Preparedness Conference

The Arctic Health Preparedness Conference was hosted in Oslo January 2025 and was devoted to discussions of how health preparedness is organised and planned across the Arctic, from local community preparedness and response to large-scale interventions requiring outside support. Participants had the opportunity to engage in conversations about current and emerging risks to human lives and health in the Arctic. The objective was to support collaboration and partnerships in the Arctic and to establish a shared situational awareness about what the main risks and threats to securing health service delivery in the Arctic are, and to explore new ways of collaboration for health preparedness.

The conference was organised by the Norwegian Red Cross and the Northern Norway Regional Health Authority (HelseNord). It gathered more than 80 participants from the USA, Canada, Finland, Sweden, Denmark, Iceland and Norway. They represented Arctic local communities and civil society, non-profit volunteer organisations, academia and the private sector, as well as governmental agencies within health, civil protection, and search and rescue services across the region. The Arctic Health Preparedness Conference demonstrated multiple case studies and examples of civil society and health authority collaboration for health preparedness and response, some of which are presented in this report. Before, during and after local and large-scale emergencies and crisis situations that affects access to and the ability to provide health care and effective first response to emergencies. To

our knowledge, this was the first international conference organised in the context of the Arctic Council and devoted exclusively to the topic of health preparedness in the Arctic, with a key objective being to engage representatives from civil society and health authorities in exchanging knowledge and establishing dialogue on existing forms of cooperation and recommendations for further strengthening partnerships in a long-term perspective. A full account of the conference contributions and key findings can be accessed in the conference summary report (*Arctic Health Preparedness Conference Report*).³³

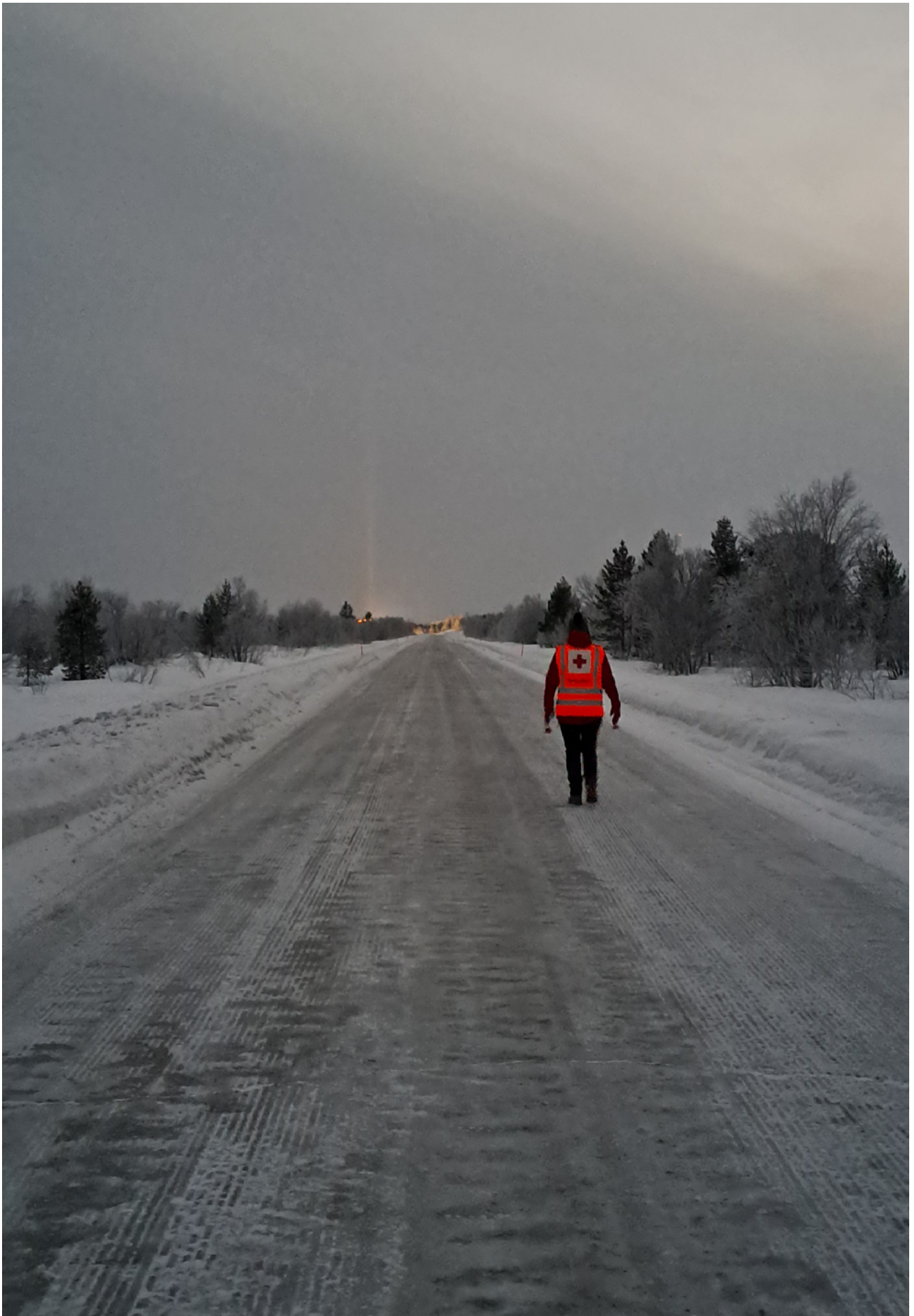
Photovoice Study

As part of the project, the Norwegian Red Cross conducted a Photovoice study with participants from Sør-Varanger Red Cross branch in Finnmark County to explore local communities perspectives and experiences of health preparedness in the Arctic region. Photovoice is a qualitative method that enables participants to visually document their lived experiences, emotions, and perspectives through photography. Photovoice is also considered to be a participatory action research method embedding both co-production and social action throughout the research and dissemination process. It empowers individuals/people to record and reflect their community's strengths and concerns and promote dialogue and knowledge about critical societal issues through group discussion of photographs.³⁴ The experiences, stories and voices of participants are also elevated locally and amongst policy makers, with one means being the development of a photo exhibition.³⁵

33. H. E. Austerheim, E. Ikonen, R. Elvegård, and N. Andreassen. *Arctic Health Preparedness Conference Report*. Norwegian Red Cross, 2025.

34. Wang, C. and Burris, M.A. 1997. Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment. *Health Education & Behavior*. 1997;24(3):369-387. DOI:10.1177/109019819702400309.

35. Wang, C. and Burris, M.A. Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment. *Health Education & Behavior*. 1997;24(3):369-387. DOI:10.1177/109019819702400309.



Photograph from the Photovoice study themed 'Vulnerable volunteering'.
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We recruited five participants from Sør-Varanger Red Cross to the project. As part of the co-production process, participants were assigned the role of co-researchers who are involved in or lead each step of the study. The data collection and analysis process centred around three focus groups that took place between the co-researchers (participants) and facilitators (researchers) during January and February 2025. Two focus groups were conducted in person in Kirkenes, Finnmark, whilst the mid-way check-in took place online. During the initial focus group, the topics for exploration were discussed and the boundaries for the project agreed upon. Informed consent was also obtained from the co-researchers, and they were offered practical photography advice and guidance.

Participants spent three weeks taking photos within Finnmark county and were eventually asked to select their favourite photographs to present to the group. A participant-led thematic analysis ensued, where participants worked together to explore and understand the meaning of their photographs and subsequently arrange them into overarching themes. Afterwards, participants selected photographs for the exhibition and developed captions for each photo. Analytical notes were taken throughout the process, and the final workshop was audio recorded and transcribed.

The transcript was coded and analysed to provide greater depth and understanding of the themes identified by the co-researchers. A summary report was written by the facilitators, and all participants read and approved the final manuscript, and the focus group transcript, of which this report builds upon. This validation is crucial to ensure meaning reflects the participants lived experiences.

A photo exhibition was developed and showcased during the Arctic Emergency Management Conference (AEMC) in Bodø, Norway, March 2025, hosted by Norway as Chair of the Arctic Council, in close collaboration with the EPPR Working Group.³⁶ The exhibition has since been showcased multiple times in Finnmark and in Oslo.³⁷

Limitations

While this report offers valuable insights into health preparedness needs and challenges in the Arctic, it is not without limitations. The findings and recommendations presented are based on the two project components: the Arctic Health Preparedness Conference and the qualitative Photovoice study. These were designed to initiate dialogue and identify areas for further and future collaboration between civil society and public authorities, rather than to provide a comprehensive or systematic assessment of all aspects of Arctic health preparedness.

Scope and Depth of Inquiry

The project's limited timeline (June 2024 to June 2025), coupled with constrained resources, meant that a comprehensive health preparedness risk assessment across the Arctic region was not feasible. As such, this report does not capture the full spectrum of hazards or vulnerabilities relevant to all Arctic communities. Instead, it offers a preliminary exploration of selected themes identified by the project team as particularly salient at this time. While certain risks and challenges are shared across the Arctic, significant local variation exists, and these differences could not be fully accounted for within the scope of this initiative.

Representativeness and Generalisability

The conference and Photovoice project provided important, though inherently limited, perspectives. Whilst we attempted to invite

36. Norwegian Chairship of the Arctic Council. 2025. *Arctic Emergency Management Conference, Responding to Emerging Challenges and Risks Conference Summary Report 2025*. Tromsø, Norway.

37. Appendix 1 Photovoice exhibition *Vulnerable and Resilient*.

broadly from the region, participation in the Arctic Health Preparedness Conference was affected by several constraints, including funding availability, the ongoing impact of restricted physical meeting formats within Arctic Council structures, and the conference's location in Oslo. These factors likely contributed to under-representation of Arctic communities, particularly Indigenous Peoples, whose voices are vital in any meaningful discourse on Arctic health and emergency preparedness.

Similarly, the Photovoice project was conducted in one local Red Cross branch in Finnmark, Norway. While this participatory approach yielded valuable insights into lived experiences, the findings are not intended to be generalisable to the broader Arctic region – or even to all communities within Finnmark county. Rather, they illustrate specific local challenges and community-driven responses, serving as an important first step in exploring community perspectives that can inform future research and action. The project team hope that this approach of participatory action research may serve as inspiration and that the methodology will be utilised more when generating experience-based knowledge in the future.

Geographic and Organisational Skew

Given that the Norwegian Red Cross served as the lead partner in the project, many of the examples, case studies and discussion points reflect Norwegian contexts and experiences. This was in part due to the ease of access to data, contacts and institutional knowledge within Norway. As a result, there is a degree of national and institutional skew in the report's content, which may limit the transferability of

findings to other Arctic nations and contexts. While many of the themes raised – such as cross-sectoral collaboration, community involvement, and infrastructure challenges – have broader relevance, specific approaches may require adaptation to local conditions outside Norway or the country in the example given.

Participation and Stakeholder Involvement

The timing of the project's approval as an Arctic Council initiative in April 2024 coincided with the gradual resumption of Working Group activities in virtual-only formats. This posed challenges for wider engagement, especially with Arctic Council representatives and international stakeholders. The limited in-person gatherings restricted opportunities for networking, sharing information, and ensuring inclusive participation in both the conference and the broader project. Despite efforts to promote diversity of representation, the range of voices included, particularly from underrepresented and Indigenous communities, remained narrower than desired.

Recognising these limitations, the project team views this report as a foundation for ongoing dialogue rather than a definitive roadmap. The findings highlight key themes and entry points for deeper investigation, rather than offering conclusive answers. It is hoped that this work will inspire future research, more inclusive regional engagement, and targeted projects that address currently underexplored aspects of Arctic health preparedness, with a strong focus on amplifying local and Indigenous perspectives.

Appendix

Vulnerable and Resilient – a photovoice exhibition from the Arctic

This exhibition shows photographs taken by volunteers from Sør-Varanger Red Cross in Finnmark county, Norway, capturing their interpretation of health preparedness. The volunteers conducted a thematic analysis of their photographs. The themes that emerged were: 'Self-preparedness in minus 30 degrees', 'In all types of weather', 'Opportunities in winterland', 'Vulnerable volunteering', 'Collaboration provides security' and 'The joy of being present'. The exhibition demonstrates how volunteers in the Arctic are resilient, solution-oriented, and accustomed

to overcoming the challenges posed by the environment. It illustrates how the surroundings demand robustness from local communities, volunteerism, and preparedness organisations. At the same time, the exhibition also reflects the vulnerability they may feel—whether due to weather, wind, climate change, or being a volunteer organisation with limited human resources. However, volunteering also creates meaning and joy within the local community. This sense of unity, in turn, strengthens preparedness and safety for everyone.



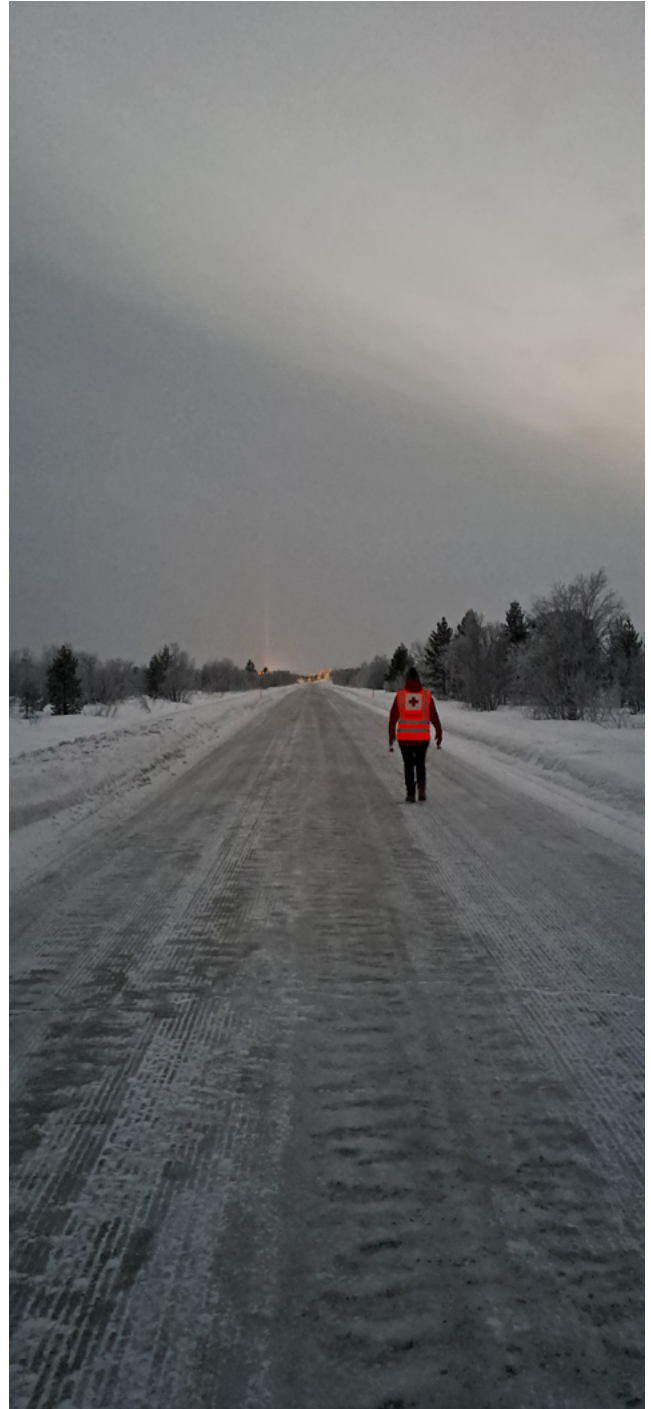
'I have named this photograph "The Ice bridge in Neiden". When the river freezes to ice it become a road and gives us an important shortcut for emergencies. We get there faster.'

© Gabriella Jurisic Ottesen | Norwegian Red Cross



'I have named this photograph 'Long roads in every direction'. The picture is taken out in the open in minus 30 degrees. I'm often driving long distances. It's often very cold. I always make sure I have a shovel, food and a sleeping bag in the car, something I've done for many years. It's not certain that there will be other cars that can help if your car stops, and so with the equipment I know that I can take care of myself. In minus 30 degrees, toilet breaks along the road are quick. It's common knowledge to leave the car running.'

© Gabriella Jurisic Ottesen | Norwegian Red Cross



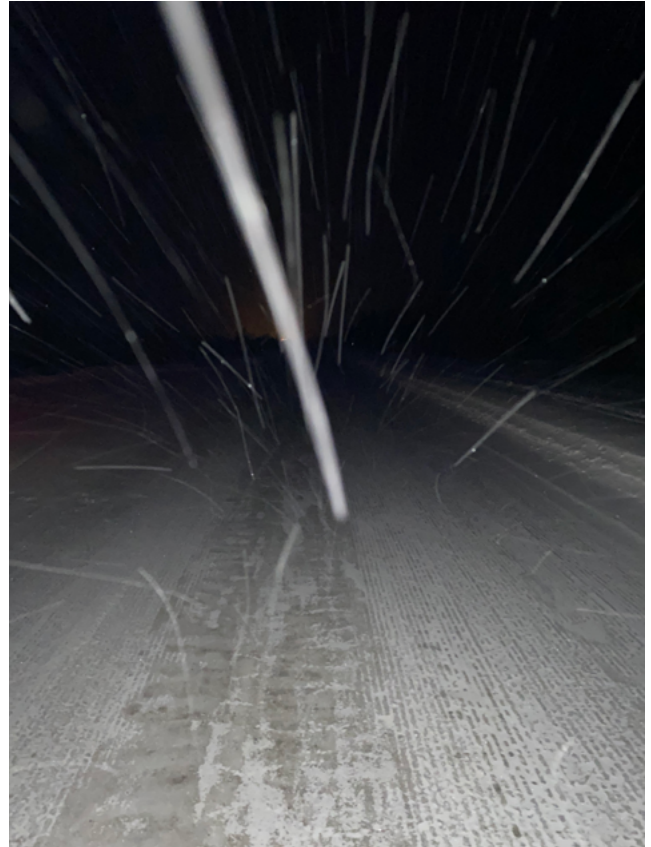
'We are always ready, but it would have been great to see the backs of more volunteers.'

© Inger M. Lindseth | Norwegian Red Cross



'Regardless of the weather, we are ready for action. It's often when the weather isn't at its best that we're called to action. Then it's a matter of finding shelter to check maps, plan further searches and have a little break.'

© Sandra Asmyhr | Norwegian Red Cross



'The title of this photograph is 'The weather is close at hand'. In Finnmark it is not possible to ignore the weather. Our preparedness in various situations takes place regardless of the weather, particularly in terrible weather. We're needed most in terrible weather.'

© Gabriella Jurisic Ottesen | Norwegian Red Cross



'The photo was taken on what we call an 'orientation trip'. With large distances, it's important to become familiar with the areas you'll be searching in. The snowmobile is absolutely invaluable to us in winter to cover large search areas. Sometimes the search area is many miles. Without the snowmobile, we would only have been able to cover a fraction of the area, as the alternative would have been skis or snowshoes.'

© Judith Fjeldberg | Norwegian Red Cross



'Crews from the Red Cross and Norwegian Rescue Dogs train for searches in avalanche . When we go out on a search, it's important that we all have the same knowledge. We need to be familiar with each other's search strategies so that we can achieve the best possible results. For me, it's reassuring to know that I know the people I'll be searching with, and that we're training together.'

© Judith Fjeldberg | Norwegian Red Cross



'It's rewarding for me to see young people in a concert atmosphere and to provide a safe environment for them. It means a lot to our youth that we are present as neutral adults. Our presence makes it a safe gathering place where young people can socialise. Without the Red Cross as emergency standby, it might not have been possible to arrange such meeting places, which would have left a void in the local community.'

© Judith Fjeldberg | Norwegian Red Cross



'We have many names on the list, but they do not show up. A leader becomes tired without active members. We have a big responsibility and we are vulnerable when only the core members remain standing.'

© Judith Fjeldberg | Norwegian Red Cross



'Two enthusiastic volunteers enjoying being on standby at a concert, even though they have to sit in the corridor. Preparedness can also bring joy. It's moments like these that creates energy and motivates me to keep volunteering with the Red Cross.'

© Judith Fjeldberg | Norwegian Red Cross



'The picture is from a summer activity for residents at the asylum reception centre, where we organise trips and experiences in the local community. An important part of health preparedness is prevention by taking care of the mental health of vulnerable groups. Together, we create good memories and prevent exclusion, where the impact lasts beyond the summer holidays and when everyone is back at work and school.'

© Sandra Asmyhr | Norwegian Red Cross



'Relationship-building in peacetime is important for response in crises. In 2024, Sør-Varanger Red Cross, together with other voluntary emergency response organisations and emergency services, arranged 'Blue Lights Day' at the town square. It's nice to present ourselves together as a "team".'

© Sandra Asmyhr | Norwegian Red Cross



'Emergency preparedness is much more than just first aid. The poster in the picture reads 'waffles are also first aid', which symbolises that there is a lot of care in waffles, both at events for the elderly and disabled, and in situations where crews and those impacted come in from 'the field', and as a symbol of what we do on the stand. The joy of the group in the picture is also an important symbol of the community we have across generations and activities.'

© Sandra Asmyhr | Norwegian Red Cross

Exhibition Alta, Finnmark, March 2025



Exhibition Oslo, May 2025



Exhibition Arctic Emergency Management Conference, Bodø, March 2025



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The Norwegian Red Cross is an active member of RC3, the research consortium of the International Red Cross and Red Crescent Movement. It is an open, collaborative and coordinated network of entities and initiatives created within the Movement that are entirely or partially dedicated to conducting and promoting research in the humanitarian field based on scientific methods.





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