

Viacheslav Lipatov, Alexandra Frolova, John Tiefenbacher

SOCIAL VULNERABILITY OF DISABLED PEOPLE IN THE ARCTIC: EVIDENCE FROM ARKHANGELSK NORTH

Climate change is transforming everyday life in the Arctic, but its effects are not experienced equally by all. Disabled people often face 'double exposure': to environmental hazards and to the social and cultural barriers that exacerbate them. Despite their heightened vulnerability, however, disability has remained largely invisible in Arctic climate research. This article addresses this gap by presenting the findings of a qualitative study conducted in nine counties in Arkhangelsk North, Russia. The study draws on interviews, participant observation and archival materials collected between 2003 and 2024. The analysis reveals how climate risks, ranging from wildfires and floods to invasive species, intersect with socio-cultural models of disability. In rural and ageing communities, syncretic folk Orthodoxy frames disasters as divine acts, discouraging preparedness and reinforcing exclusion. In urban centres, however, volunteer initiatives, digital networks and inclusive practices signal a shift towards the social model of disability. This cultural and spatial heterogeneity demonstrates that vulnerability is not merely about exposure to hazards but also about how disability is understood and managed. By situating disability at the centre of climate vulnerability, the study makes theoretical and practical contributions. It shows the indispensable nature of qualitative methods in data-poor Arctic contexts and proposes ways to integrate local knowledge, social policy and disaster risk reduction (DRR). The findings suggest that climate adaptation in the Arctic must go beyond technical measures and engage with the cultural perceptions and social inequalities that determine who is protected and who is left behind.

Viacheslav Lipatov — Cand. Sci. (Polit.), Associate Professor, Financial University under the Government of the Russian Federation, Moscow, Russian Federation. Email: viacheslav.lipatov@fulbrightmail.org

Alexandra Frolova — Cand. Sci. (Hist.), Senior Researcher, Institute of Ethnology and Anthropology of the Russian Academy of Sciences, Moscow, Russian Federation. Email: alexnauka2017@gmail.com

John Tiefenbacher — PhD in Geography, Professor of Geography, Texas State University, San Marcos, Texas, USA. Email: tief@txstate.edu

Keywords: climate change, social vulnerability, disabled persons, religious socio-cultural model, the Arctic

Citation: Lipatov V., Frolova A., Tiefenbacher J. (2025) Social Vulnerability of Disabled People in the Arctic: Evidence from Arkhangelsk North. *Zhurnal issledovaniy sotsial'noi politiki* [The Journal of Social Policy Studies], 23 (3): 563–576.

DOI: 10.17323/727-0634-2025-23-3-563-576

Climate change is one of the defining global challenges of the 21st century, with profound social, economic and environmental consequences. These transformations are nowhere more pronounced than in the Arctic (Graybill 2015). The consequences of climate-related disasters depend not only on the intensity of the hazard itself, but also on social factors that make some people more vulnerable than others, such as income, age, gender, religion and disability (Alexander 2015; Williams, Webb 2021). Disaster risk reduction (DRR), which links disaster management and social policy, is typically designed with the majority population in mind, assuming the capabilities of able-bodied and socially advantaged groups. This approach leaves marginalised groups, particularly persons with disabilities and with insufficiently protection, as they are expected to adapt to existing risks largely without institutional support (Bennett 2020; Maurya 2019).

While the unequal impacts of climate change are well documented globally, the implications for people with disabilities in the Arctic, and particularly in the Russia, remain insufficiently examined (Vincent 2020). Although the Nuuk Declaration (Arctic Council 2011) calls for integrating climate change and human development into Arctic social policy, these principles are only weakly implemented. In Arkhangelsk North, traditional communities such as the Pomors and peasant *obshchinas*, alongside with ageing populations, continue to face heightened vulnerability.

This study focuses on nine counties of Arkhangelsk Oblast, where census data indicate a general population decline of over 20 % in the general population and a decline of over 30 % among people with disabilities between 2010 and 2020 (Rosstat 2024). The study tests the hypothesis that qualitative methods can effectively assess the climate vulnerability of disabled people in Arctic regions with limited data. The analysis adapts Western concepts of social vulnerability to Russian conditions, addressing three key questions: (a) how disabled people experience climate change and related disasters; (b) how socio-cultural models shape perceptions of disability and climate risks; and (c) what measures could reduce the vulnerability of disabled populations in the region.

Climate Impacts and Vulnerability in the Russian Arctic

Climate change poses significant risks to Arctic communities, including permafrost thawing, coastal erosion, flooding, wildfires and the spread of in-

fectious diseases (Revich 2008; Rautio et al. 2014). These hazards are exacerbated by structural factors such as geographical isolation, inadequate infrastructure and prolonged periods of darkness and extreme cold, which hinder disaster response efforts (Eichelberger 2015). Socioeconomic transformations, ranging from urban decline to intensified resource extraction, further disrupt traditional livelihoods and create new forms of marginalisation (Stefansson Arctic Institute 2004; Akimov et al. 2016). The consequences for social policy are direct. Climate change affects health systems, social care and living conditions, increasing the vulnerability of those already at risk, particularly persons with disabilities. Limited access to medical services in remote areas and the spread of climate-sensitive diseases in both Russia and Alaska illustrate how environmental pressures can exacerbate inequality (Fedotov et al. 2011; Hueffer et al. 2013). Therefore, scholars stress the importance of linking DRR with health and social policy in order to address both immediate emergencies and longer-term well-being (Vladimirov et al. 2002).

The Sendai Framework for DRR 2015-2030 and subsequent UN strategies emphasise the inclusion of persons with disabilities in disaster preparedness and response (UNDRR 2015). Despite this international recognition, there is still a gap between disability rights legislation and DRR practice (Calgaro 2021). In the Arctic, sparse populations, harsh conditions and institutional constraints make it difficult to provide inclusive care, particularly for indigenous communities (Pauksztat et al. 2024). At the same time, comparative evidence shows that countries such as Canada, Norway and the USA have developed more effective approaches than Russia. These approaches rely on social vulnerability indices, telemedicine and stronger cross-sectoral cooperation (Flanagan et al. 2018; Stefansson Arctic Institute 2004). This suggests that the key issue lies not only in medical epistemologies, but also in the broader governance structures and resources mobilised for adaptation.

Building on these insights, the present study situates the Russian Arctic within wider debates on social vulnerability and disability. It applies the concept of social vulnerability to examine how environmental hazards interact with institutional arrangements and socio-cultural models of disability to shape the adaptive capacity of Arctic communities.

Analytical Framework: Disability, Culture and Climate Vulnerability in the Arctic

Disability can be approached through a range of theoretical models. For the purposes of this study, however, the medical, social and religious models are the most relevant (Retief, Letšosa 2018). During the Soviet period, the dominance of the medical model resulted in segregation and exclusion. However, current legislation reflects a gradual shift towards the social model, expanding rights related to employment, family life and community integration (Cook, Iarskaia-

Smirnova, 2023). In the Arctic, however, impairments are still largely perceived through medical and religious lenses. Ableism remains widespread and, in some regions, syncretic folk traditions influence attitudes towards disability and interpretations of climate-related hazards (Pauksztat et al. 2024).

Religious and cultural frameworks continue to influence perceptions of disasters. Studies have highlighted the dual roles of religious beliefs in disaster preparedness and recovery: while they can hinder progress (Orr et al. 2021; Aksa et al. 2020), they can also foster resilience and social cohesion (Fountain, McLaughlin, 2016). Despite its rich traditions of geomythology, indigenous ecological knowledge and folk healing, the Arctic is underrepresented in this debate. In the Pomor and peasant *obshchina* communities of Arkhangelsk North, syncretic Orthodoxy and herbal medicine remain influential in shaping local understandings of disability and natural hazards (Bernshtam 2009; Frolova 2020). Such beliefs coexist with modern medical practices, contributing to distinctive socio-cultural models of vulnerability. Indigenous knowledge also plays an important role in adaptation. For example, Sami and Inuit communities have developed long-standing rules of mutual assistance, subsistence practices and intergenerational knowledge of ice, land, and ecosystems, all of which remain vital for coping with environmental change (Laidler et al. 2009; Schweitzer et al. 2014). While such knowledge can enhance resilience, reliance on outdated practices can also increase risks. Therefore, the interplay between traditional and modern strategies is a key factor in assessing adaptive capacity (Cold et al. 2020).

According to Ragozin (2003), social vulnerability is defined as the likelihood of negative health and life outcomes for specific groups. This is determined not only by exposure to natural hazards but also by social, cultural, and institutional factors such as housing conditions, infrastructure, preparedness and everyday mobility. In the Arctic counties of Arkhangelsk Oblast, vulnerability is shaped simultaneously by environmental risks, such as floods, permafrost degradation, and wildfires, weak infrastructure, and socio-cultural models of disability, ranging from medicalised approaches to religious interpretations. For people with disabilities, these overlapping pressures translate into heightened risks, as barriers to services and social participation limit their adaptive capacity. In the absence of reliable quantitative data on disability in Russia (Rosstat 2024), qualitative methods provide an effective means of capturing how vulnerability is produced locally and how adaptive strategies evolve (Ford, Smit 2004). This analytical framework informs the empirical analysis presented in the following sections.

Research Strategy and Methods

The study combined archival and field research conducted between 2003 and 2024. At the pre-field stage, background material was collected to contextualise

disability and climate vulnerability in Arkhangelsk Oblast. Local mass media and social networks (e.g., VKontakte) were used to trace everyday accounts of disasters, social support and disability-related issues. Historical and ethnographic records on traditional coping practices, cultural perceptions of disability and community responses to environmental hazards were obtained from archival sources in St Petersburg (including the 'Ethnographic Bureau' of V.N. Tenishev at the Russian Museum of Ethnography) and in Arkhangelsk Oblast (regional archives and local museums). Primary fieldwork relied on two main qualitative methods: semi-structured in-depth interviews and participant observation. The latter included not only factual accounts, as well as reflexive and material aspects of everyday life, which were documented through fieldnotes and photographs. In total, approximately 170 informants were interviewed, including adults with disabilities, their relatives, parents of disabled children, neighbours, social workers, emergency service personnel and volunteers. Sampling combined socio-demographic criteria (gender, age, education, place of residence) with geographical coverage across urban, rural, remote and indigenous (sourdough) communities in the selected counties. A multi-stage approach was adopted, incorporating snowball sampling to expand the network of contacts through 'friends of friends.' Since 2013, local administrations and correctional centres have also provided support with recruitment. To account for demographic outmigration, a higher proportion of older residents was included from rural and remote areas. Sampling was guided by the principle of informational saturation; new interviews ceased once they no longer provided new insights into a given county (Nosenko-Stein 2018).

Interviews lasted between one and two and a half hours and were recorded. The interview guide included four thematic blocks: (1) socio-demographics; (2) socio-economic conditions; (3) disability and social inclusion; and (4) social policy in managing climate-related hazards, vulnerabilities and risks. Data analysis proceeded in two stages. First, narratives were situated at the intersection of sociology, anthropology, geography, climatology and epidemiology within the overarching framework of social vulnerability using a cross-disciplinary lens. Second, an informative analysis was conducted to classify and systematise the substantial body of material accumulated over 21 years.

The study has limitations. Individuals with mental disabilities were excluded from the sample, meaning the findings cannot be generalised to this group.

Results

Cultural Interpretations of Natural Hazards

Cultural and religious frameworks have a strong influence on how disabled people and their communities in Arkhangelsk North perceive and respond to natural hazards. Fires, floods, and heatwaves are often not interpreted as technical or environmental events, but rather through folk Orthodoxy, mythological

beliefs, and ritual practices. These views reinforce social vulnerability by discouraging engagement with formal preparedness systems and sustaining reliance on traditional explanations.

One case study illustrates how religious interpretations can combine with structural exclusion. A man with cerebral palsy who lived alone regarded fire as a divine act and neglected basic safety measures. As his neighbour recalled: *'The disabled person did not fix the exposed electrical wiring. There were also no automatic fire alarms or emergency exits, nor any fire extinguishing drills'* (Woman, 59 y., 2021, Onega county). A social worker described the outcome: *'Raindrops penetrated through a leaky roof and fell on the exposed electrical wiring... firefighters found a heavily charred corpse near the main entrance'* (Woman, 53 y., 2021, Onega county). In other narratives, znajushchajas (folk healers) appear as agents of protection: *'Prior to arrival of a fire vehicle, a very powerful znajushaja started to extinguish the fire... she ran several times around the burning building with an icon, saying arcane rites or prayers all the while'* (Disabled woman, 71 y., 2005, Mezen county; Disabled woman, 69 y., 2003, Pinega county). Similarly, heatwaves strengthen appeals to sacred protection: *'Heat waves increase the appeal of Orthodox saints and shrines, as well as traditional treatments, nutrition, and sacred protection'* (Woman, 45 y., 2022, Onega county, Disabled child's parent).

Floods are also interpreted through myth and ritual. In the Pomor tradition, protective objects or spirits such as the *vodyanoy* play a central role. One respondent recalled: *'Once upon a time, my brother and I tried to get a horse across the river... The horse swam and swam, and then suddenly went under the water... The brother shouted: "Throw an axe." I threw the axe into the water — and the horse swam out'* (Disabled man, 80 y., 2003, Pinega county). Others described communal practices such as constructing chapels or votive crosses: *'A cross and chapel were placed across a river, where many people had drowned. This action protected our area. After the cross and chapel were destroyed, people started to drown again'* (Disabled man, 58 y., 2004, Pinega county).

Such narratives demonstrate how mythological frameworks continue to shape vulnerability, influencing everyday practices and responses to hazards. However, change is underway. Gradual shifts towards the social model of disability are becoming apparent, especially in urban areas. Volunteer organisations such as *Blagodeya*, *Azimut*, *The Other Side* and *Dobrij Sever* provide rehabilitation equipment, support for parents, and inclusive programmes for disabled children. Digital technologies are helping to reduce inequality and strengthen inclusion. Parents and relatives mobilise support via social media platforms: *'VKontakte or other social group platforms created by parents and relatives fundraise disabled children and provide reciprocal assistance'* (Woman, 49 y., 2022, Arkhangelsk, Disabled child's parent). New initiatives such as the *Forest Patrol* project involve schoolchildren and disabled young people in wildfire prevention, signalling an emerging generational shift in attitudes.

New Ecological Threats

Global warming has introduced unfamiliar ecological risks in Arkhangelsk North, including the arrival of invasive species and changes in animal behaviour. For older residents, many of whom have disabilities, these changes create a heightened sense of vulnerability, arising from both direct physical danger and fear and uncertainty. As one respondent observed: *'Old people, many of whom are disabled, are very afraid of any snakes; they do not know how to identify poisonous ones'* (Disabled woman, 79 y., 2022, Primorsk county). Community responses reveal how anxiety itself becomes a dimension of vulnerability. Even relatively harmless species can provoke collective alarm: *'A meeting was organized to discuss a found insect and its potential dangers'* (Disabled woman, 79 y., 2022, Primorsk county). Similar concerns extend to larger animals, particularly predators. A hunter described how wolves *'run around a village in winter, even pull dogs out from behind fences, they're not afraid of anything'* (Man, 63 y., 2005, Mezen county).

These accounts highlight the role of perception in shaping vulnerability. Limited access to reliable information and weak institutional communication amplify fears, leaving residents, in particular disabled and elderly individuals, without effective strategies for distinguishing real risks from perceived ones. As a result, ecological change not only increases not only material hazards, but also social and psychological stress, thereby further constraining adaptive capacity.

Accessibility and Infrastructure

Cultural stigma remains a significant factor in shaping the vulnerability of disabled people in Arkhangelsk North. As one volunteer explained: *'Many villagers still hide the existence of disabled children and do not advertise this information to guests or distant relatives. The family resolves all issues'* (Woman, 52 y., 2020, Arkhangelsk, Senior volunteer). Such practices limit visibility, reduce access to institutional support, and leave families to cope in isolation. In the context of climate-related hazards, where timely assistance and coordinated responses are vital, social invisibility directly increases risk.

These cultural barriers intersect with infrastructural shortcomings, compounding social vulnerability. A lack of ramps, tactile markings and other components of a barrier-free environment restrict everyday mobility and make emergency evacuation more difficult: *'There are no ramps, yellow markings at pedestrian crossings and other components of a barrier-free environment. Onega's unsatisfactory state is exacerbated by impassable roads and a lack of asphalt covering central streets'* (Field notes, Onega, 2022). As Fig. 1 illustrates, the poor state of central Onega highlights how inadequate infrastructure undermines resilience. Moreover, the absence of mobile phone coverage across large parts of the county further isolates residents, limiting their access to early warnings, emergency coordination and social networks.

Fig. 1. Problems with accessibility and a lack of barrier-free environment: the center of Onga, 2022



Together, stigma and infrastructural deficits reveal how climate change interacts with existing barriers. Physical inaccessibility and social exclusion not only reduce everyday quality of life and magnify exposure, limiting adaptive capacity during climate-related disasters.

Positive Consequences

Respondents also identified certain positive consequences of climate warming, creating new opportunities for adaptation. Longer summer seasons have expanded leisure options, particularly through the development of public beaches along the Arctic coast. New recreational spaces have emerged on Yagry Island in Severodvinsk, improving access to coastal areas for local populations, including families with disabled children.

Warmer conditions have also stimulated small-scale agriculture. Local households report that vegetables such as tomatoes, cucumbers and pumpkins, as well as berries including raspberries, strawberries and cherries, have become more abundant. Families with disabled children have described experimenting with new food sources: *'The local populations including disabled children and their relatives are also having an experience with a new type of mushroom — chanterelles'* (field notes, Arkhangelsk Oblast, 2022). These developments illustrate that while climate change heightens risks, it also reshapes livelihoods and everyday practices in ways that can enhance resilience.

Discussion and conclusion

This study examined the climate vulnerability of disabled people in nine counties of Arkhangelsk Oblast, where census data indicate a sharp demographic decline, with the proportion of disabled residents falling even faster

than that of the general population. Guided by the concept of social vulnerability, the analysis tested the hypothesis that qualitative methods could be an effective tool for understanding climate risks in data-poor Arctic regions with limited data. The research was structured around three questions: how disabled people experience climate change and related disasters; how socio-cultural models shape perceptions of disability and climate risks; and which measures could reduce vulnerability.

Experiences of disabled people under climate change

The findings confirm that disabled people experience climate hazards differently from other groups, often in ways that amplify existing inequalities. Heatwaves and wildfires pose a threat to health and safety in areas evacuation routes and safety training are absent. Floods can disrupt everyday life in communities located near rivers, while the spread of invasive species and changes in animal behaviour can generate new fears and risks, particularly among elderly and disabled residents. Structural barriers, such as impassable roads, dilapidated housing, and insufficient communication infrastructure, compound these threats by limiting mobility, delaying emergency responses and isolating households. Together, these conditions show how climate hazards intersect with physical, institutional and demographic vulnerabilities, leaving disabled people disproportionately exposed.

The role of socio-cultural models

The analysis also reveals how perceptions of both disability and disaster are shaped by socio-cultural frameworks. In rural and remote areas, syncretic folk Orthodoxy and Pomor traditions persist in framing hazards as divine or supernatural phenomena. For example, fires may be attributed to fate, floods to the will of spirits, and disabilities to inherited or mystical causes. While such interpretations sometimes provide coping rituals and social cohesion, they often discourage engagement with formal preparedness measures and reinforce exclusion. In contrast, urban centres such as Arkhangelsk, Severodvinsk and Novodvinsk are adopting more rational and inclusive approaches. Volunteer organisations, rehabilitation programmes and digital platforms such as VKontakte illustrate how the social model of disability is being translated into everyday practices. The Pinega and Primorsk counties lie in between these two extremes, reflecting the coexistence of medical, religious and social models. This cultural heterogeneity underscores that vulnerability is not only a matter of exposure to hazards but also of how societies conceptualise disability and allocate support.

Measures to reduce vulnerability.

Reducing the climate vulnerability of disabled people requires coordinated action at multiple levels. Currently, inclusive DRR is underdeveloped in

Arkhangelsk North, with state programmes focusing narrowly on institutional care and neglecting individuals outside such facilities. While families, neighbours and local volunteers do fill some of these gaps, their efforts are fragmented and uneven. The evidence presented here suggests that building resilience depends on linking DRR more systematically with health and social policy. This would ensure that evacuation plans, emergency warnings and protective infrastructure account for the needs of disabled individuals. Coordination among diverse stakeholders, including state agencies, local administrations, volunteer groups, the Russian Orthodox Church, indigenous associations and online communities, is essential. Without such integration, the most vulnerable groups will continue to be excluded from preparedness and recovery efforts, resulting in low adaptive capacity.

Methodological implications

The study also demonstrates the value of qualitative approaches in Arctic contexts. In regions where statistical data on disability are scarce, outdated or too aggregated, in-depth interviews and participant observation provide a more accurate picture of the lived realities of vulnerability. Narratives reveal how cultural beliefs, infrastructural deficits and institutional neglect converge in everyday experiences of risk. They also provide insight into emerging adaptive strategies, ranging from volunteer projects such as *Forest Patrol* to the use of digital networks for fundraising and mutual aid. Therefore, these methods not only document vulnerabilities but also identify opportunities for resilience that would remain invisible in purely quantitative analyses.

Concluding reflections

Overall, the case study of Arkhangelsk North highlights how disability can significantly amplify climate vulnerability. In counties such as Onega, Leshukonsk and Mezen, archaic socio-cultural models, demographic ageing and infrastructural decay create especially high risks, whereas urban centres are beginning to implement more inclusive practices. The positive effects of climate change, such as longer summers, new recreational opportunities, and higher yields of vegetables and berries, do not offset the structural disadvantages faced by disabled residents. However, these changes suggest that adaptation is possible if local knowledge, cultural traditions and modern social policy are considered together.

This study has identified the most significant climate-related risks for disabled people in Arkhangelsk North and outlined mechanisms for improving inclusive DRR. To support these efforts, supplementary materials are provided in the electronic appendix to the article: a comparative overview of the consequences of climate change consequences for disabled people (Table S1 of the electronic application), and a schematic representation of the coordination between state and community stakeholders in inclusive DRR (Figure S1 of the

electronic application). These materials illustrate the paper's central argument: that climate adaptation in the Arctic must address not only environmental hazards and the social, cultural and institutional contexts that shape vulnerability.

Future research should further explore the climate vulnerability of people with mental disabilities further, as they were excluded from this study. The qualitative framework should also be extended to other Arctic and data-poor contexts, including Canada, Greenland, Alaska and northern Scandinavia. By situating disability at the centre of climate adaptation research, we can develop a clearer understanding of how to build resilience for those most at risk.

Acknowledgement

This research project was funded by the Russian Science Foundation under grant number № 23–18–00214 titled 'Digital technologies and the quality of life of people with disabilities: comparative experience of post-Soviet countries and the State of Israel'.

Description of the field data

DISANTH (2020) *Otchet s.n.s., k.i.n. IEA RAN Frolovoy A.V ob ekspeditsii v Arkhangel'skuyu oblast' v avguste 2020 goda* [Report by Senior Research Fellow, Candidate of Historical Sciences, Institute of Ethnology and Anthropology RAS, A. V. Frolova, on the expedition to Arkhangelsk Oblast in August 2020]. Available at: <https://clck.ru/3P8wVj> (accessed 25 June 2023).

DISANTH (2022) *Otchet s.n.s., k.i.n. IEA RAN Frolovoy A. V. ob ekspeditsii v Arkhangel'skuyu oblast'. 2–17 avgusta 2022 g.* [Report by Senior Research Fellow, Candidate of Historical Sciences, Institute of Ethnology and Anthropology RAS, A. V. Frolova, on the expedition to Arkhangelsk Oblast. 2–17 August 2022]. Available at: <https://clck.ru/3P8wz2> (accessed 24 June 2023).

References

- Akimov V. A., Durnev R. A., Sokolov Yu.I. (2016) *Zashhita naselenija i territorij Rossijskoj federacii v uslovijah izmenenija klimata* [Protection of the Population and Territories of the Russian Federation in the Context of Climate Change]. Moscow: All-Russian research institute for civil defense and emergency situations of EMERCOM of Russia.
- Aksa F., Utaya S., Bachri S., Handoyo B. (2020) The Role of Knowledge and Fatalism in College Students Related to the Earthquake-Risk Perception. *Jāmbā: Journal of Disaster Risk Studies*, 12 (1): 954.
- Alexander D. (2015) Disability and Disaster: An Overview. In: I. Kelman, L. M. Stough (eds.) *Disability and Disaster: Explorations and Exchanges*. New York: Palgrave Macmillan: 15–29.
- Arctic Council (2011) *Nuuk Declaration*. Available at: <https://clck.ru/3P8xaj> (accessed 24 July 2024).

Bennett D. (2020) Five Years Later: Assessing the Implementation of the Four Priorities of the Sendai Framework for Inclusion of People with Disabilities. *International Journal of Disaster Risk Science*, (11): 155–166.

Bernshtam T. A. (2009) *Narodnaja kul'tura Pomor''ja* [Folk Culture of Pomorye]. Moscow: OGI.

Calgaro E. (2021) Climate Disaster Risk, Disability, and Resilience. *Current history*, 120 (829): 320–325.

Cold H., Brinkman T., Brown C., Hollingsworth T., Brown D., Heeringa K. (2020) Assessing Vulnerability of Subsistence Travel to Effects of Environmental Change in Interior Alaska. *Ecology and Society*, 25 (1): 20.

Cook L., Iarskaia-Smirnova E. (2023) Welfare Reforms in Post-Soviet States: Current Issues and Research Highlights. *Europe-Asia Studies*, 75 (2): 173–185.

Eichelberger J. C. (2015) *Natural Disaster Risk and Engagement in the Arctic*. AGU, Fall Meeting 2015, abstract id. NH12A-04.

Fedotov D., Zubov L., Nazarov A. (2011) Vozdejstvie izmenenija klimata na tradicionnyj uklad zhizni korenogo naselenija i uslovija okazaniya medicinskoj pomoshhi v Neneckom avtonomnom okruge [The Impact of Climate Change on the Traditional Way of Life of the Indigenous Population and the Conditions of the Provision of Medical Care in the Nenets Autonomous Okrug]. Materialy vsrossijskoj nauchno-prakticheskoj konferencii s mezhdunarodnym uchastiem 'Cirkumpoljarnaja medicina: vlijanie faktorov okruzhajushchej sredy na formirovanie zdorov'ja cheloveka' [Proceeding of All-Russian Science and Practice Conference with International Participation 'Circumpolar Medicine: Impact of Environmental Factors on Human Health Formation'], 27th-29th June. Arkhangelsk: 294–297.

Flanagan B., Hallisey E., Adams E., Lavery A. (2018) Measuring Community Vulnerability to Natural and Anthropogenic Hazards: The Centers for Disease Control and Prevention's Social Vulnerability Index. *Journal of Environmental Health*, 80 (10): 34–36.

Ford J., Smit B. (2004) A Framework for Assessing the Vulnerability of Communities in the Canadian Arctic to Risks Associated with Climate Change. *Arctic*, 57 (4): 389–400.

Fountain P., McLaughlin L. (2016) Salvage and Salvation. Guest Editors' Introduction. *Asian Ethnology*, 75(1): 1–28.

Frolova A. V. (2020) 'Znajushchaja': vozvrashchenie v traditsiyu v sovremennom sel'skom soobshchestve (po materialam Arkhangel'skogo Severa) ['Folk Healer': Return to Tradition in a Modern Rural Community (Based on Materials from Arkhangelsk North)]. In: *Materialy XIII mezhdunarodnoj nauchnoj konferencii Rossijskoj asociacii issledovatelej zhenskoj istorii i Instituta jetnologii i antropologii im. N. N. Mikluho-Maklaja RAN* [Proceedings of the 13th International Scientific Conference of the Russian Association of Women's History Researchers and N. N. Miklukho-Maklay Institute of Ethnology and Anthropology of RAS]. Vol. 2. Moscow: N. N. Miklukho-Maklay Institute of Ethnology and Anthropology: 221–224.

Graybill J. (2015) Urban Climate Vulnerability and Governance in the Russian North. *Polar Geography*, 38 (4): 306–320.

Hueffer K., Parkinson A., Gerlach R., Berner J. (2013) Zoonotic Infections in Alaska: Disease Prevalence, Potential Impact of Climate Change And Recommended Actions for Earlier Disease Detection, Research, Prevention and Control. *International Journal of Circumpolar Health*, 72 (1). DOI: 10.3402/ijch.v72i0.19562.

Laidler G., Ford J., Gough W., Ikummaq T., Gagnon A., Kowal S., Qrunnut K., Irngaut C. (2009) Travelling and Hunting in a Changing Arctic: Assessing Inuit Vulnerability to Sea Ice Change in Igloodlik, Nunavut. *Climatic Change* 94 (3–4): 363–397.

Maurya V. (2019) Natural Disasters, Psychological Well-Being, and Resilience: Concerns Related to Marginalized Groups. *International Journal of Research and Analytical Reviews*, 6 (1): 270–275.

Nosenko-Stein E. (2018) Vvedenie [Introduction]. In: A. S. Kurlenkova, E. E. Nosenko-Stein (eds.) *Obratnaya storona Luny, ili chto my NE znaem ob invalidnosti: antropologicheskij vzgljad* [The Other Side of the Moon, or What We Don't Know about Disability: Theory, Representations, Practices]. Moscow: MBA Publishers: 7–16.

Orr Z., Erbllich T., Unger S., Barnea O., Weinstein M., Agnon A. (2021) Earthquake Preparedness among Religious Minority Groups: The Case of the Jewish ultra-Orthodox Society in Israel. *Natural Hazards and Earth System Sciences*, 21 (1): 317–337.

Pauksztat B., Bliksvær T., Fabritius M., Elixhauser S., Ferrara A., Weber R., William L. (2024) Indigenous People with Disabilities in the Arctic. *The Polar Journal*. DOI:10.1080/2154896X.2024.2391216

Ragozin A. (2003) Social'naya i ekologicheskaya uyazvimost'. Uyazvimost' ob'ektov hozyajstva, naseleniya i okruzhayushchej sredy dlya prirodnyh opasnostej [Social and Ecological Vulnerability. Vulnerability of Economic Facilities, Population, and the Environment to Natural Hazards]. In: A. Ragozin (ed.) *Prirodnye opasnosti Rossii. Ocenka i upravlenie prirodnymi riskami. Tom 6* [Natural Hazards of Russia. Natural Risk Assessment and Management. Vol. 6]. Moscow: KRUK: 109–120.

Rautio A., Poppel B., Young K., Emelyanova A., Sandra J., Sunnari V. (2014) Human Health and Well-Being. In: J. N. Larsen, G. Fondahl (eds.) *Arctic Human Development Report. Regional Processes and Global Linkages*. Denmark: Rosendahls-Schultz Grafisk: 299–348.

Retief M., Letšosa R. (2018) Models of Disability: A Brief Overview. *HTS Teologiese Studies*, 74 (1). DOI:10.4102/hts.v74i1.4738.

Revich B. (2008) *Climate Change Impact on Public Health in the Russian Arctic*. Moscow: United Nations Office in the Russian Federation.

Rosstat (2024) *Vserossijskij perepisi naseleniya 2002, 2010 i 2021 godov* [2021, 2010 and 2002 Russian Censuses]. Available at: https://29.rosstat.gov.ru/census_and_researching (accessed 27 February 2024).

Schweitzer P., Sköld P., Ulturgasheva O. (2014) Cultures and Identities. In: J. N. Larsen, G. Fondahl (eds.) *Arctic Human Development Report. Regional Processes and Global Linkages (AH-DRII)*. Denmark: Rosendahls-Schultz Grafisk: 299–348.

Stefansson Arctic Institute (2004) *Arctic Human Development Report (AHDR I)*. Available at: <https://www.svs.is/en/moya/page/ahdr-i-2004-chapters> (accessed 24 July 2024).

UNDRR (2015) Sendai Framework for Disaster Risk Reduction 2015–2030. Available at: <https://clck.ru/3P92bQ> (accessed 24 July 2024).

Vincent W. F. (2020) Arctic Climate Change: Local Impacts, Global Consequences, and Policy Implications. In: K. Coates, C. Holroyd (eds.) *The Palgrave Handbook of Arctic Policy and Politics*. Cham: Palgrave Macmillan: 507–526.

Vladimirov V., Kimstach I., Kudryavtsev B., Martynov B., Reznikov V., Bobiy B., Akin'shin A., Isaev V. (2002) Okazanie meditsinskoy pomoshchi postradavshim v chrezvychaynykh situatsiyakh prirodnogo kharaktera [Assisting Natural Disaster Victims with Medical Care]. In: V. Vladimirov, Yu. Vorob'ev, V. Osipov (eds.) *Prirodnye opasnosti Rossii. Prirodnye opasnosti i obshchestvo. Tom 1* [Natural Hazards of Russia. Natural Hazards and Society. Vol. 1]. Moscow: KRUK: 196–200.

Williams B. D., Webb G. R. (2021) Social Vulnerability and Disaster: Understanding the Perspectives of Practitioners. *Disasters*, 45 (2): 278–295.