

Migration and Climate Change in Pakistan: A Case Study of Existing Threats and Planned Relocations

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Abstract

Climate change has emerged as a significant driver of human mobility worldwide, compelling governments and communities to develop adaptive strategies to mitigate displacement risks. Pakistan, highly vulnerable to climate-induced hazards such as floods, droughts, and extreme weather events, has initiated planned relocation programs to reduce the impacts of climate-induced displacement. This study examines the effectiveness and inclusivity of government-led planned relocation initiatives in Quetta, Balochistan, focusing on the transparency of site selection, adequacy of infrastructure, and participation of affected communities. Additionally, it evaluates the role and capacity of civil society organizations (CSOs) in addressing climate-induced migration, including early warning systems, emergency response, and advocacy for climate migrants' rights. Employing a qualitative research design, in-depth interviews were conducted with 11 CSO members operating in Quetta. Thematic analysis identified five major themes: inclusivity and community participation, transparency and decision-making in site selection, adequacy of housing and basic infrastructure, CSO preparedness and resource capacity, and collaboration between state and non-state actors. Participants highlighted gaps in consultation with affected communities, inconsistent infrastructure provision, and limited coordination between government and CSOs. Findings suggest that while planned relocation represents a strategic response to climate-induced displacement, its implementation requires enhanced transparency, inclusive planning, and strengthened civil society engagement. The study contributes to understanding the governance of climate-induced migration in Pakistan, providing evidence-based recommendations for policymakers, humanitarian actors, and civil society to improve the effectiveness, equity, and sustainability of relocation initiatives.

Keywords: Migration; Climate Change; Threats; Planned Relocations.

1. Introduction

Climate change policies and international agreements have increasingly recognized the need to address the protection and rights of climate migrants, yet significant gaps remain in the legal frameworks designed to support these individuals. The Paris Agreement of 2015 marked a pivotal moment by incorporating scientific insights into policymaking, urging states to address climate-induced migration using the best available science. However, the rights of climate-displaced peoples are still largely neglected, with existing policy measures deemed inadequate to address the scale and urgency of the issue (Koskina et al., 2024). The lack of a concrete international legal framework specifically for climate migrants leaves them vulnerable to human rights violations, as current instruments like the 1951 Refugee Convention do not adequately cover their unique circumstances (Okedele et al., 2024; Seid, 2022). Despite the recognition of climate change as a driver of migration in documents like the

United Nations Global Compact for Safe, Orderly and Regular Migration, environmental threats are not yet a basis for protection under international law (Vaha, 2021). Scholars argue for the development of new legal frameworks or the adaptation of existing ones to ensure the protection and rights of climate migrants, emphasizing the need for binding regional agreements tailored to their needs (Millar, 2023; Seid, 2022). The current legal mechanisms based on humanitarian, human rights, and environmental law are insufficient, prompting calls for new international treaties and soft law mechanisms to address forced displacement due to climate change (Salvador, 2023). Overall, while there is a growing acknowledgment of the issue, the international community must intensify efforts to create robust legal protections and integrate scientific evidence into policymaking to ensure climate migrants are adequately supported and their rights upheld (Baldwin et al., 2018; Gattani, 2024; Koskina et al., 2024).

Climate-related disasters significantly impact the livelihoods of vulnerable communities in South Asia, primarily due to the region's heavy reliance on climate-sensitive sectors such as agriculture and fishing. These disasters exacerbate existing socioeconomic inequalities, destroy infrastructure, and lead to a decline in living standards, particularly affecting women, children, and the elderly. The forced migration resulting from these events, often termed climate-induced displacement, is driven by extreme weather changes, sea-level rise, and altered rainfall patterns, leading to loss of homes and livelihoods, increased poverty, health issues, and conflicts (Moitree et al., 2024). In Bangladesh, for instance, frequent floods, cyclones, and droughts have destabilized lives, forcing many to migrate to urban areas like Dhaka, where they face severe vulnerabilities, including substandard living conditions in slums (Luetz, 2018; Yang, 2023). Migration is often used as a strategy to diversify income and spread risks, with remittances playing a crucial role in enhancing household adaptive capacity, albeit limitedly (Maharjan et al., 2020). However, the influx of migrants into urban areas strains infrastructure, exacerbates resource conflicts, and contributes to political instability. Long-term consequences of climate migration include the erosion of human adaptive capacity, as migrants often lack education and face legal invisibility, limiting their access to humanitarian aid and increasing their exposure to violence and exploitation (Luetz, 2018). The situation calls for integrated, risk-informed policies that address deep-rooted socioeconomic inequalities and enhance institutional capacities to support safe and dignified migration. Moreover, regional cooperation and international support are essential to develop sustainable adaptation strategies and improve the resilience of affected communities (Hase, 2023; Moitree et al., 2024).

The geography of Balochistan significantly contributes to its vulnerability to climate-related hazards such as droughts and floods due to its diverse and challenging topography, which includes rugged terrain, mountains, hills, and valleys. This topographical complexity exacerbates the impact of torrential rains, leading to devastating flash floods and landslides, which are further intensified by the region's erratic precipitation patterns (Aamir et al., 2022). Balochistan's climate is characterized by arid and semi-arid conditions, with significant spatial and temporal variability in precipitation, making it prone to severe droughts (Ashraf et al., 2015; Jamro et al., 2020). The province experiences frequent transitions between dry and wet periods, with shorter intervals between these extremes, which limits recovery time and amplifies the severity of subsequent floods. Historical data indicates that Balochistan has faced recurring prolonged droughts, with significant negative trends in precipitation observed across the region (Durrani et al., 2018; Jamro et al., 2020). The southern and eastern parts of Balochistan receive heavy monsoon rains, while the western regions are influenced by winter depressions, contributing to the region's complex climate dynamics (Khan et al., 2023). Additionally, the socio-economic reliance on agriculture and livestock, coupled with weak institutional capacities and political instability, further exacerbates the region's vulnerability to these climate-related hazards (Makki et al., 2024). The persistent drought conditions have led to land degradation and a decline in agricultural productivity, which are critical issues given the region's dependence on these sectors for livelihoods (Islam et al., 2004). Overall, Balochistan's geographical and climatic characteristics, combined with socio-economic and political factors, create a fragile environment highly susceptible to climate-induced hazards.

This study examines climate-induced migration in Quetta, Balochistan, focusing on the effectiveness

and inclusivity of planned relocation programs and the role of civil society organizations. The study aims to provide insights into governance structures, operational capacities, and participation processes, contributing to evidence-based policy interventions. Understanding the lived experiences and perspectives of CSO members is essential for improving relocation initiatives, ensuring transparency, and fostering resilient communities. The study holds significance for policymakers, humanitarian actors, and scholars interested in climate adaptation, migration governance, and sustainable development in fragile contexts. The introduction aligns directly with the study's two primary research objectives, which frame an in-depth examination of climate-induced migration management in Balochistan. The first objective is to assess the effectiveness and inclusivity of government-led planned relocation initiatives, focusing on the transparency of site selection, the adequacy of infrastructure, and the extent of community participation. The second objective evaluates the capacity and strategic focus of Civil Society Organizations (CSOs) in responding to climate-induced migration, including their roles in early warning systems, emergency response mechanisms, and advocacy for the rights of climate migrants. By addressing these interconnected questions, the study deepens understanding of the governance, operational, and ethical dimensions shaping climate-induced migration management in Balochistan, while linking global best practices to the province's local realities.

2. Review of Literature

2.1. Climate Change and Human Mobility

Climate change significantly influences human mobility, manifesting through various mechanisms such as migration, displacement, and planned relocation, both internally and across borders (Corendea & Bhardwaj, 2024). The interplay between climate stressors—like rising sea levels, extreme weather events, and temperature increases—and human mobility is complex, often exacerbating vulnerabilities among the most affected populations (Capisani, 2023; Gören, 2022). Research indicates that local contexts shape the selectivity of responses to climate impacts, highlighting that not all individuals or communities have the same capacity to adapt or choose to move, leading to instances of both mobility and immobility (Capisani, 2023). Furthermore, the relationship is bidirectional; human mobility can also contribute to climate change through emissions from transport systems, which are themselves vulnerable to climate impacts (Katz, 2023). This multifaceted nexus underscores the need for integrated approaches in policy and research to address the challenges posed by climate-related mobility (Capisani, 2023; Katz, 2023).

2.2. Planned Relocation as an Adaptive Strategy

Planned relocation efforts can be effective in reducing disaster risk and enhancing the resilience of relocated communities, but their success is contingent upon various factors. Research indicates that while temporary relocations can effectively reduce exposure to hazards, permanent relocations often lead to significant challenges, including disruption of social networks and cultural identity loss (Daudt et al., 2024; Nalau & Handmer, 2018). Effective planning and support systems are crucial; for instance, economic incentives and community integration strategies can mitigate the hardships associated with relocation (Bier & King, 2024; Iuchi & Mutter, 2020). Studies from diverse contexts, such as Beijing and disaster-prone areas in Asia, highlight that follow-up support and community services significantly improve well-being and resilience (Iuchi & Mutter, 2020; Wang et al., 2024). However, the governance of relocation processes must prioritize community involvement and address equity issues to ensure that vulnerable populations are not further marginalized (Bier & King, 2024; Iuchi & Mutter, 2020). Thus, a holistic approach that encompasses social, economic, and psychological support is essential for successful relocation outcomes.

2.3. Governance and Institutional Challenges

International cooperation plays a crucial role in effective governance for managing climate-induced migration across national borders, as the phenomenon presents complex challenges that transcend

national boundaries. The increasing frequency of environmental disasters, exacerbated by climate change, is projected to displace millions, with estimates suggesting up to 250 million people may be affected by 2050 (Mayer, 2011). Current international legal frameworks are inadequate, lacking specific protections for those displaced by environmental factors, which necessitates the development of new governance models that integrate human rights and environmental laws (Berkower, 2021; Mayer, 2011). Furthermore, the interplay between state sovereignty and individual rights complicates the governance landscape, highlighting the need for collaborative approaches among nations to address the multifaceted nature of climate migration (Kraemer, 2017; Martin, 2010). Effective international cooperation can facilitate the sharing of resources, best practices, and adaptation strategies, ultimately ensuring that vulnerable populations receive the necessary support and protection (Biermann & Boas, 2012; Kraemer, 2017).

2.4. Role of Civil Society Organizations (CSOs)

Civil society organizations (CSOs) play a pivotal role in influencing policy decisions related to climate migration and displacement through advocacy efforts that raise awareness and mobilize action. These organizations engage in lobbying activities aimed at highlighting the urgent need for comprehensive policies addressing the impacts of climate change on vulnerable populations, particularly those facing displacement due to extreme weather events and environmental degradation (Oliver-González, 2024). By framing climate migration as a critical issue intersecting with human security and sustainable development, CSOs contribute to the discourse within global policy forums, including the United Nations Framework Convention on Climate Change. Their advocacy not only informs policymakers but also promotes risk-informed approaches that integrate climate justice into migration policies, thereby fostering resilience and sustainable solutions. Through these efforts, CSOs effectively shape the narrative and institutional responses to climate-induced migration, ensuring that the needs of displaced populations are recognized and addressed in policy frameworks (Becker, 2022; Chazalnoel & Ionesco, 2018; UNFCCC).

3. Material and Methods

This study employed a qualitative research design to explore the governance and operational dimensions of planned relocation initiatives in Quetta, Balochistan. The study population consisted of civil society organization members actively engaged in climate-induced migration and displacement management. A purposive sample of 11 participants was selected to ensure diversity in organizational affiliation, experience, and area of expertise. Data collection involved in-depth interviews, each lasting 60–90 minutes. Interviews explored participants' perceptions of government-led relocation programs, community participation, infrastructure adequacy, transparency, and the role of CSOs. Interviews were transcribed verbatim and analyzed using thematic analysis following Braun and Clarke (2006). Codes were generated from recurring patterns in the data, and themes were developed to capture the lived experiences and professional perspectives of participants regarding climate-induced migration and relocation efforts.

4. Data Analysis and Discussion

4.1. Inclusivity and Community Participation

The findings reveal that limited community participation in relocation and resettlement planning significantly affects the legitimacy and effectiveness of such programs. Participants consistently reported that affected communities were often excluded from key decisions regarding site selection, resource allocation, and planning of relocation processes. This lack of inclusion undermined trust, created resistance, and reduced the alignment of interventions with local needs and priorities. Participants described a top-down approach in which decisions were communicated after they had already been made, leaving communities with little opportunity to provide input or influence outcomes. One participant highlighted this issue, stating, *"Communities are often informed after decisions have been made. Their input in site selection and planning is minimal, which leads to resistance and dissatisfaction with the relocation process."* This quotation reflects a broader pattern

reported by respondents: when participation is limited, relocation programs are perceived as externally imposed rather than collaboratively developed, reducing their social legitimacy and effectiveness.

The study also revealed that insufficient consultation contributes to practical challenges during relocation. Participants noted that when community preferences were ignored, relocated populations faced logistical difficulties, including inadequate access to basic services, culturally inappropriate housing arrangements, and poor alignment with livelihood opportunities. These oversights intensified frustration, eroded confidence in authorities, and sometimes led to community protests or non-compliance with relocation directives. Moreover, participants emphasized that inclusivity extends beyond consultation to meaningful participation in planning and decision-making processes. Active involvement of community representatives, local leaders, and vulnerable groups—such as women, ethnic minorities, and the elderly—was seen as essential to ensure that relocation programs are equitable, contextually relevant, and responsive to specific needs. When such participation is lacking, programs risk reinforcing existing social inequalities and alienating the very populations they intend to support.

These findings align with broader research on participatory governance, which underscores that community engagement enhances both the effectiveness and sustainability of interventions. Inclusive processes foster ownership, build trust, and improve compliance, ultimately contributing to better social and developmental outcomes. In contrast, neglecting participation exacerbates perceptions of injustice and reduces the overall impact of government and humanitarian initiatives. Overall, the results highlight that inclusive planning and community participation are critical to successful relocation programs. Policymakers and implementing agencies must prioritize structured consultation mechanisms, integrate community feedback into planning, and ensure ongoing dialogue with affected populations to enhance the legitimacy, acceptability, and effectiveness of relocation initiatives.

4.2. Transparency and Decision-Making in Site Selection

The findings indicate that transparency in the process of relocation site selection is a significant concern for affected communities. Participants consistently reported that the criteria and rationale behind choosing particular sites were unclear, creating perceptions of unfairness and bias. This lack of transparency not only undermined trust in authorities but also affected the legitimacy and acceptance of relocation programs among displaced populations. Participants described a decision-making process perceived as opaque and unaccountable, with limited explanations provided regarding why some areas were selected for relocation while others were disregarded. One participant noted, *“There is no clear explanation why certain areas are chosen for relocation while others are ignored. People feel that politics and favoritism sometimes influence these decisions rather than safety or vulnerability assessments.”* This quotation reflects the widespread sentiment among respondents, highlighting concerns that site selection may be influenced by political considerations, personal connections, or administrative convenience rather than objective assessments of risk, need, or vulnerability.

The study revealed that unclear criteria and opaque procedures contributed to community skepticism and dissatisfaction. Participants explained that when relocation decisions appeared arbitrary or biased, affected populations questioned the fairness of interventions, sometimes resisting relocation altogether. Such resistance could delay implementation, reduce compliance with safety measures, and increase the social and logistical challenges associated with resettlement programs. Moreover, participants emphasized that transparency is closely linked to trust, equity, and participatory governance. When communities are informed about the rationale behind site selection and are included in discussions, they are more likely to perceive decisions as legitimate and fair. Conversely, when decisions are made behind closed doors, perceptions of favoritism, inequality, and discrimination can intensify, exacerbating tensions between authorities and displaced populations.

The findings align with broader literature on disaster management and relocation, which stresses that clear, transparent, and participatory decision-making processes are essential for effective intervention. Transparent criteria, communicated openly and consistently, help ensure that decisions are based on vulnerability, safety, and need rather than informal or political factors. Such processes enhance

legitimacy, foster community cooperation, and support smoother implementation of relocation programs. Overall, the results underscore that improving transparency in site selection is critical for building trust, ensuring fairness, and strengthening the effectiveness of relocation initiatives. Establishing clear criteria, documenting the decision-making process, and actively communicating with affected communities are essential steps toward equitable, accountable, and accepted relocation policies.

4.3. Adequacy of Housing and Basic Infrastructure

The findings indicate that the adequacy of housing and basic infrastructure at relocation sites is a major concern for displaced communities. Participants consistently reported that, despite being moved to ostensibly safer areas, essential services such as housing, clean water, sanitation, and social facilities were often insufficient or entirely absent. These deficiencies not only affected day-to-day living conditions but also undermined the broader objectives of relocation programs, including safety, well-being, and social stability. Participants described relocation as incomplete or superficial when basic amenities were lacking. One participant explained, *“Even after relocation, basic services like clean water and functional sanitation are missing. Families struggle daily, which undermines the whole purpose of moving them to safer areas.”* This quotation illustrates how inadequate infrastructure transforms relocation from a protective measure into a source of additional hardship, leaving communities struggling to meet fundamental needs and eroding confidence in the authorities responsible for planning and implementation.

The study revealed that insufficient infrastructure has both immediate and long-term consequences. On a daily basis, the absence of clean water, sanitation, and health facilities increases vulnerability to illness, stress, and social tension. Over time, inadequate housing and service provision hinder the establishment of stable livelihoods, community cohesion, and access to education and healthcare, limiting the sustainability of relocation efforts. Participants highlighted that these infrastructural gaps often force families to rely on informal solutions or personal resources, further exacerbating socio-economic inequities. Moreover, participants emphasized that adequate infrastructure is not only a technical requirement but a measure of social equity and human dignity. Relocation sites that fail to meet basic living standards signal neglect and marginalization, particularly for vulnerable groups such as women, children, and ethnic minorities. Inadequate facilities also reduce community resilience, as residents are less able to focus on livelihood restoration, education, or social integration when survival needs remain unmet.

These findings align with broader research on displacement and resettlement, which underscores that successful relocation programs require comprehensive planning that integrates housing, water, sanitation, and social services. Providing adequate infrastructure is critical not only for the physical safety of relocated populations but also for fostering trust, stability, and the long-term effectiveness of interventions. Overall, the results demonstrate that ensuring sufficient housing and essential services is central to the success of relocation initiatives. Policymakers and implementing agencies must prioritize infrastructural adequacy to enhance the well-being, resilience, and satisfaction of displaced communities, thereby achieving the intended protective and developmental outcomes of relocation programs.

4.4. CSO Preparedness and Resource Capacity

The findings indicate that civil society organizations (CSOs) are essential actors in supporting relocation and displacement interventions, providing emergency response, awareness campaigns, and advocacy. Participants consistently emphasized the critical role CSOs play in supplementing government efforts, particularly in reaching vulnerable populations and addressing gaps in formal service delivery. However, despite their dedication, CSOs face significant resource and capacity constraints that limit their effectiveness and reach. Participants described challenges related to funding, staffing, and operational logistics. Limited financial resources constrained the ability of organizations to maintain ongoing programs, procure necessary supplies, or extend services to remote or marginalized communities. Similarly, staffing shortages restricted the scope and consistency of

interventions, forcing organizations to prioritize certain areas or populations while leaving others underserved. One participant summarized these challenges, stating, *“We do our best to provide emergency response, awareness campaigns, and advocacy, but limited funding and staff mean we cannot reach all affected communities or provide sustained support.”* This quotation highlights the gap between CSOs’ ambitions and their operational capacity, underscoring how resource limitations directly affect service delivery and advocacy outcomes.

The study also revealed that limited preparedness further exacerbates vulnerabilities in relocation contexts. CSOs often struggled to implement proactive measures, such as risk assessments, pre-relocation awareness campaigns, or coordinated emergency responses, due to the lack of infrastructure, training, and financial stability. As a result, displaced populations sometimes experienced delays in receiving support, inconsistent guidance, or insufficient access to basic services, which compounded the challenges associated with relocation and resettlement. Participants emphasized that capacity-building is critical for enhancing CSO effectiveness. Strengthening organizational resources, investing in staff training, and improving logistical capabilities were identified as essential steps to enable CSOs to provide comprehensive, sustained, and equitable support. Enhanced preparedness not only improves immediate emergency response but also strengthens advocacy efforts, ensuring that the voices and needs of displaced communities are represented in planning and policy processes.

These findings align with broader literature on civil society engagement in humanitarian and relocation contexts, which underscores that adequate funding, staffing, and operational capacity are essential for CSOs to fulfill their complementary role alongside government interventions. Without these resources, CSOs remain constrained in their ability to mitigate vulnerabilities, monitor implementation, and advocate effectively. Overall, the results demonstrate that building CSO capacity is vital for effective service delivery and advocacy, ensuring that displaced populations receive timely, equitable, and sustainable support, and that interventions are both responsive and accountable.

4.5. Collaboration between State and Non-State Actors

The findings indicate that effective collaboration between government agencies and civil society organizations (CSOs) is critical for successful relocation and displacement interventions, yet participants consistently reported that coordination in practice remains weak and inconsistent. While partnerships are recognized as valuable in principle, operational gaps and the absence of structured communication mechanisms hinder the efficiency, reach, and impact of relocation programs. Participants highlighted that collaboration often exists only in theory, with limited structured interaction between actors. One participant emphasized this challenge, stating, *“Collaboration exists in theory, but in practice, there is no structured communication platform. Joint planning, monitoring, and feedback mechanisms are weak or absent.”* This quotation reflects a shared concern among participants that while both state and non-state actors aim to serve displaced communities, fragmented coordination undermines program effectiveness, resulting in duplicated efforts, resource gaps, and missed opportunities for strategic alignment.

The study revealed that weak collaboration affects multiple stages of relocation processes, including planning, implementation, and monitoring. Without joint planning sessions, relocation initiatives often fail to account for local needs, community priorities, and logistical realities. Similarly, the absence of shared monitoring and feedback mechanisms reduces accountability, as errors, delays, or service gaps may go unreported or unresolved. Participants emphasized that these shortcomings not only impact operational efficiency but also affect community trust and confidence in both governmental and civil society actors. Additionally, participants noted that structural differences between state and non-state actors exacerbate coordination challenges. Government agencies often operate under formal bureaucratic procedures and rigid mandates, while CSOs are constrained by limited funding, staffing, and logistical resources. Without formal platforms for dialogue, shared decision-making, and feedback, these differences hinder joint problem-solving and limit the potential for complementary interventions.

Despite these challenges, participants recognized that strengthening collaboration offers significant

benefits, including improved governance, more effective service delivery, enhanced accountability, and increased responsiveness to community needs. Institutionalizing regular coordination meetings, shared reporting systems, and formal feedback mechanisms were suggested as essential measures to enhance the effectiveness of interventions and ensure resources reach the most vulnerable populations. Overall, the results suggest that integrated, structured collaboration between state and non-state actors is essential for maximizing the impact of relocation programs. By fostering coordinated planning, transparent monitoring, and open communication, partnerships can enhance efficiency, accountability, and the legitimacy of interventions, ultimately improving outcomes for displaced communities.

5. Conclusions

This study examines climate-induced migration and planned relocation initiatives in Quetta, Balochistan, highlighting governance challenges, CSO capacities, and operational limitations. Findings reveal that while planned relocation represents a proactive strategy to reduce climate vulnerability, its effectiveness is limited by insufficient community participation, lack of transparency in site selection, and inadequate housing and basic infrastructure. Civil society organizations play a vital role in supporting relocated communities, providing emergency services, advocacy, and awareness. However, their capacity is constrained by funding shortages, limited staffing, and weak coordination with government agencies. Participants emphasized the need for structured collaboration mechanisms, transparent decision-making processes, and inclusive planning to ensure that relocation programs meet the needs of affected populations. The study underscores the importance of governance, accountability, and ethical responsibility in climate-induced displacement management. Policymakers must enhance the transparency and inclusivity of relocation initiatives, invest in adequate infrastructure, and support CSOs to strengthen emergency response and advocacy. Ensuring community participation, equitable resource distribution, and sustained monitoring are critical for the legitimacy and success of relocation programs. By documenting frontline perspectives, this research contributes to understanding the challenges and opportunities in managing climate-induced migration in Pakistan. The findings provide evidence-based recommendations for policymakers, humanitarian actors, and civil society to improve the effectiveness, equity, and sustainability of planned relocation initiatives, ultimately enhancing resilience and protection for climate-vulnerable populations in Balochistan.

References

- Aamir, E., Khan, A., & Tariq, M. A. (2022). The influence of teleconnections on the precipitation in Baluchistan. *Atmosphere*, 13(7), 1001. <https://doi.org/10.3390/atmos13071001>
- Ashraf, M. W., Routray, J. K., & Ashraf, M. W. (2015). Spatio-temporal characteristics of precipitation and drought in Balochistan Province, Pakistan. *Natural Hazards*, 77(1), 229–254. <https://doi.org/10.1007/s11069-015-1593-1>
- Baldwin, A., Cubie, D., & Mihr, A. (Eds.). (2018). *Climate change, migration and human rights*. Routledge.
- Becker, M. (2022). Governing people on the move in a warming world: Framing climate change migration and the UNFCCC Task Force on Displacement. *Global Environmental Change*, 76, 102578. <https://doi.org/10.1016/j.gloenvcha.2022.102578>
- Berkower, R. (2021). As the tide rises: Addressing the legal gap in international climate migration governance. *The Interdependent: Journal of Undergraduate Research in Global Studies*. <https://doi.org/10.33682/akqn-as8v>
- Bier, V. M., & King, S. E. (2024). Relocation due to climate change. In *Oxford research encyclopedia of natural hazard science*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780199389407.013.516>
- Biermann, F., & Boas, I. (2012). Climate change and human migration: Towards a global governance system to protect climate refugees. In *Climate change, human security and violent conflict* (pp. 291–300). Springer. https://doi.org/10.1007/978-3-642-28626-1_15
- Capisani, S. (2023). Climate change and human mobilities. In M. G. J. B. T.-H. in P. (Ed.), *Handbook*

of the philosophy of climate change (pp. 2535–2553). Springer. https://doi.org/10.1007/978-3-031-07002-0_124

Chazalnoel, M. T., & Ionesco, D. (2018). Advancing the global governance of climate migration through the United Nations Framework Convention on Climate Change and the Global Compact on Migration: Perspectives from the International Organization for Migration. In *Routledge handbook of migration and development* (pp. 69–80). Routledge. <https://doi.org/10.4324/9781315109619-7>

Corendea, C., & Bhardwaj, C. (2024). Addressing human mobility in international law on climate change and beyond. In *Research handbook on international law and climate change* (pp. 469–482). Routledge. <https://doi.org/10.4324/9781003276678-36>

Daudt, F. W., Rodrigues, E. da S., Leitão, G., & Silva, R. V. (2024). The social impacts of relocating communities in risk areas. *Seven Multidisciplinary*. <https://doi.org/10.56238/sevenmulti2024-038>

Durrani, I. H., Adnan, S., Khan, J. A., Umar, M., & Khan, M. S. (2018). Historical and future climatological drought projections over Quetta Valley, Balochistan, Pakistan. *IOP Conference Series: Materials Science and Engineering*, 414(1), 012043. <https://doi.org/10.1088/1757-899X/414/1/012043>

Gattani, S. (2024). “Climate change migrants”: Barriers to a protection framework and the requirement for migration inclusion. *International Journal for Multidisciplinary Research*, 6(1). <https://doi.org/10.36948/ijfmr.2024.v06i01.12203>

Gören, H. G. (2022). Climate change and human mobility. In *Climate crises and the Anthropocene* (pp. 91–106). Emerald Publishing. <https://doi.org/10.1108/978-1-80382-911-120221007>

Hase, V. (2023). Livelihood resilience of climate-induced displaced people in South Asia: Implications for Bangladesh. In M. N. I. Khan, M. H. H. Khan, M. R. H. Khan, & A. J. M. M. Hasan (Eds.), *Climate change and community resilience* (pp. 59–74). Emerald Publishing. <https://doi.org/10.1108/978-1-80455-448-720231005>

Islam, M., Ahmad, S., & Afzal, M. (2004). Drought in Balochistan of Pakistan: Prospects and management. *Pakistan Economic and Social Review*, 42(1/2), 155–172.

Iuchi, K., & Mutter, J. C. (2020). Governing community relocation after major disasters: An analysis of three different approaches and its outcomes in Asia. *Progress in Disaster Science*, 6, 100071. <https://doi.org/10.1016/j.pdisas.2020.100071>

Jamro, S., Channa, F. N., Dars, G. H., Ansari, K., & Krakauer, N. Y. (2020). Exploring the evolution of drought characteristics in Balochistan, Pakistan. *Applied Sciences*, 10(3), 913. <https://doi.org/10.3390/app10030913>

Katz, A. (2023). The dual relationship between human mobility and climate change in Central Asia: Tackling the vulnerability of mobility infrastructure and transport-related environmental issues. In *Climate change and health* (pp. 147–165). Springer. https://doi.org/10.1007/978-3-031-29831-8_9

Khan, S., Shahab, S., Fani, M. I., Khan, M. S., & Khan, M. Y. (2023). Climate and weather condition of Balochistan Province, Pakistan. *International Journal of Economic and Environment Geology*, 12(2), 65–70. <https://doi.org/10.46660/ijeeg.v12i2.104>

Koskina, A., Georgantas, E., & Plionis, M. (2024). Climate crisis and human migration: The emergent sociolegal parameters of a science-based policymaking. *Frontiers in Political Science*, 6, 1468711. <https://doi.org/10.3389/fpos.2024.1468711>

Kraemer, R. A. (2017). *The G20 and building global governance for “climate refugees.”* Institute for Advanced Sustainability Studies (IASS).

Luetz, J. M. (2018). Climate change and migration in Bangladesh: Empirically derived lessons and opportunities for policy makers and practitioners. In W. L. Filho (Ed.), *Climate change impacts and adaptation strategies for coastal communities* (pp. 59–105). Springer. https://doi.org/10.1007/978-3-319-64599-5_5

Maharjan, A., de Campos, R. S., Singh, C., [+11 more authors]. (2020). Migration and household adaptation in climate-sensitive hotspots in South Asia. *Current Climate Change Reports*, 6, 1–21. <https://doi.org/10.1007/s40641-020-00153-z>

Makki, M., Butt, F. A., Akash, S. A., Iqbal, M. F., & Hasnain, S. A. (2024). Fragile geographies and the climate-conflict nexus: Investigating climate-induced security risks, migration, and inequality in

- Balochistan, Pakistan. *Alternatives: Global, Local, Political*. Advance online publication. <https://doi.org/10.1177/03043754241291728>
- Martin, S. F. (2010). Climate change, migration, and governance. *Global Governance*, 16(3), 397–414. <https://doi.org/10.1163/19426720-01603008>
- Mayer, B. (2011). *Governing international climate change-induced migration*. Social Science Research Network. <https://doi.org/10.2139/ssrn.1955849>
- Mayer, B. (2011). *The international legal protection of climate (or environmental) migrants at the crossroads: Fraternity, responsibility and sustainability* [Paper presentation]. Society of International Economic Law (SIEL) 2nd Biennial Global Conference, University of Barcelona. Social Science Research Network. <https://doi.org/10.2139/ssrn.1806760>
- Millar, A. (2023). Climate migration in the international and domestic regulation of migration. *University of South Australia Law Review*, 5, 1662. <https://doi.org/10.21913/uslrunislr.v5.1662>
- Moitree, S. M., Robin, S., Chitra, S. M., & [+1 more]. (2024). Climate-induced displacement and migration and adaptation strategies in South Asia: Some observations. *The Journal of Bangladesh and Global Affairs*, 3(1–2). <https://doi.org/10.55875/jbga.v3n1-2a9>
- Nalau, J., & Handmer, J. (2018). Improving development outcomes and reducing disaster risk through planned community relocation. *Sustainability*, 10(10), 3545. <https://doi.org/10.3390/su10103545>
- Okedele, P. O., Aziza, O. R., Oduro, P., & [+1 more]. (2024). Climate-induced migration: Global legal implications and human rights challenges. *International Journal of Science and Technology Research Archive*, 7(2), 1–14. <https://doi.org/10.53771/ijstra.2024.7.2.0071>
- Oliver-González, A. B. (2024). Las organizaciones no gubernamentales y sus influencias lobbying: clima e inmigración [Non-governmental organizations and their lobbying influences: Climate and immigration]. *AD Research*, 30, 275–299. <https://doi.org/10.7263/adresic-30-275>
- Salvador, S. (2023). Climate change-induced population displacement: Challenges and legal–political proposals for its regulation. *Actualidad Jurídica Ambiental*, 127, 341–365. <https://doi.org/10.56398/ajacieda.00341>
- Seid, A. (2022). *The legal status and protection of “climate migrants” under international law*. Social Science Research Network. <https://doi.org/10.2139/ssrn.4217129>
- Vaha, M. (2021). Protection for “climate migrants”: Global challenges and a call for political leadership. In *The Routledge handbook of refugee law* (pp. 315–330). Routledge.
- Wang, J., Sui, X., Zhang, J., Liu, T., & Wang, X. (2024). Relocating disaster-prone villages and improving villager well-being: Evidence from Beijing, China. *Urban Resilience and Sustainability*, 2(1), 12–25. <https://doi.org/10.3934/urs.2024012>
- Yang, L. (2023). Changing climate and new migration crisis in Bangladesh. In *Climate change and human migration* (pp. 53–70). Routledge. <https://doi.org/10.4324/9781003367802-4>