Climate-driven Internal Displacement and Social Cohesion in Libya's Coastal Cities

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Abstract
Climate change is increasingly recognized as a major driver of internal displacement, particularly in fragile states like Libya where environmental shocks intersect with political instability and weak governance. This study investigates how climate-induced internal displacement affects social cohesion in Libya's coastal cities, focusing on Tripoli, Misrata, and Benghazi. Using a qualitative research design, data were collected through in-depth interviews, focus group discussions, and field observations involving internally displaced persons (IDPs), host community members, and local stakeholders. Findings reveal that environmental factors such as drought and flooding have forced vulnerable populations to migrate from Libya's interior regions to urban coastal centers. These displacements have strained public services, exacerbated competition for resources, and led to growing tensions between displaced populations and host communities. Social trust, mutual support, and access to services have all been undermined, while IDPs often face legal invisibility, psychological stress, and marginalization. Despite these challenges, the research identifies promising local initiatives that have fostered integration and rebuilt social ties, including joint livelihood programs and inclusive municipal governance efforts. However, these efforts remain fragmented and unsustainable without broader policy support. The study concludes that to prevent further erosion of social cohesion, Libya must adopt a national legal framework to recognize and protect climate-displaced persons, strengthen municipal capacities, and integrate displacement considerations into urban planning and climate adaptation strategies. This article contributes to emerging literature on climate migration and urban resilience by providing grounded, context-specific insights into how environmental displacement reshapes the social fabric in post-conflict settings.

| Keywords | climate displacement, internal migration, Libya, social cohesion, urban resilience. |

INTRODUCTION

Climate change has emerged as one of the most pressing global challenges of the 21st century, transcending ecological concerns to become a critical socio-political and humanitarian issue. Rising global temperatures, shifting precipitation patterns, sea-level rise, and the increasing frequency of extreme weather events are all contributing to significant disruptions in human settlement patterns. One of the most tangible consequences of this global environmental shift is the intensification of internal displacement, where individuals or communities are forced to leave their habitual residences and relocate within national borders due to the adverse effects of climate-induced environmental degradation. In developing countries and regions plagued by protracted conflict, such as Libya, climate-induced displacement adds a new layer of complexity to an already fragile socio-political landscape.

Since the fall of Muammar Gaddafi's regime in 2011, Libya has experienced prolonged periods of political instability, violent conflict, and institutional fragmentation. These

conditions have led to a significant rise in internally displaced persons (IDPs), most of whom have been forced to flee conflict zones. However, less attention has been paid to displacement triggered by environmental pressures, particularly those exacerbated by climate change. Libya's geographic and climatic characteristics make it especially vulnerable to such pressures. Much of the country consists of arid or semi-arid land, with increasing signs of desertification, declining groundwater levels, and reduced agricultural productivity. As a result, communities in the country's interior have increasingly migrated toward coastal cities such as Tripoli, Benghazi, and Misrata—urban centers perceived to offer more stable living conditions, better infrastructure, and access to public services.

This environmentally driven internal migration, however, places enormous pressure on host communities. Libya's coastal cities, already grappling with post-conflict recovery, face the dual burden of integrating growing populations while managing limited resources. Infrastructure in these areas remains underdeveloped, governance systems are weak, and public services are overextended. The influx of climate-displaced populations intensifies competition over housing, employment, education, and healthcare, and often results in social tensions between long-term residents and newcomers. In such a volatile context, internal displacement becomes not only a humanitarian concern but also a potential catalyst for broader social fragmentation and instability.

The legal and policy frameworks to protect climate-displaced persons remain underdeveloped in most countries, including Libya. Although international instruments such as the Kampala Convention offer regional guidance on the rights of internally displaced persons in Africa, implementation remains limited and highly contingent on domestic political will and capacity. Maguire (2011) underscores that climate-induced IDPs often fall into a legal void, as they are not explicitly recognized under the 1951 Refugee Convention or other major international legal instruments. This gap leaves many displaced persons without adequate support or recognition, making complicating efforts to provide targeted assistance and undermining long-term integration efforts. In Libya, where state institutions are fragmented and weak, these challenges are magnified, leading to a governance vacuum in addressing displacement, particularly in relation to climate change.

Empirical studies from Tripoli and other Libyan cities highlight the socio-economic vulnerabilities of climate-displaced populations. Sryh and Özcebe (2020) found that internally displaced persons residing in camps exhibited significantly lower scores on both physical and mental quality-of-life measures compared to those living in private accommodations. The study also identified a high prevalence of mental health disorders among camp residents, driven in part by chronic stress, poor living conditions, and limited access to healthcare. These disparities underline how the type of settlement and the availability of social support directly influence the well-being of displaced populations, with implications for their ability to integrate and contribute to host communities.

The influx of internally displaced people also affects host communities, which must cope with sudden demographic shifts and resource scarcity. When integration policies are absent or poorly designed, tensions often arise. Perceptions of unfair access to resources, job competition, and cultural differences can create divisions that erode trust and lead to open

conflict. In a study of displacement across several countries, Jayakody et al. (2022) identified eight key approaches to strengthening social cohesion in the aftermath of disaster- and conflict-induced displacement. These include equitable provision of basic services, community-based support programs, inclusive urban planning, and initiatives to foster economic interdependence between displaced persons and host populations. However, implementing such strategies in fragile states like Libya presents numerous challenges due to weak institutions and ongoing security concerns.

Social cohesion plays a pivotal role in community resilience, especially in the context of environmental and political stress. It refers to the strength of relationships and the sense of solidarity among members of a community. In situations of internal displacement, maintaining social cohesion requires proactive policies and inclusive practices that address not only material needs but also psychological and relational dynamics. Without deliberate efforts to foster mutual understanding and cooperation, displacement can lead to long-term societal fragmentation. This is particularly critical in coastal urban areas, where the intersection of migration, economic instability, and infrastructure deficits creates a volatile mix.

Despite the mounting evidence on the links between climate change, displacement, and social cohesion globally, there remains a paucity of research specifically focused on Libya. Most existing literature tends to examine displacement in the context of armed conflict or focuses on international migration from Libya to Europe. Very few studies have explored the intersection of environmental stress, internal displacement, and its implications for social cohesion at the city level. This gap is striking given that Libya is one of the country's most acutely affected by both climate change and protracted internal displacement. Moreover, the coastal cities receiving the majority of displaced populations are already experiencing ecological pressures such as sea-level rise and coastal erosion, further complicating urban planning and service provision.

This study aims to fill this critical gap by examining how climate-driven internal displacement affects social cohesion in Libya's coastal cities. Specifically, it seeks to (1) identify the environmental drivers of internal displacement in Libya; (2) explore how displacement alters social dynamics in host communities; and (3) evaluate the potential for policy interventions to strengthen social cohesion in the face of these changes. The research is grounded in qualitative methodology, using interviews with displaced individuals, local residents, civil society organizations, and municipal authorities. By capturing lived experiences and local perspectives, the study aims to offer grounded insights into the challenges and opportunities for building cohesive urban societies in the context of environmental disruption.

The central research questions guiding this inquiry are: How does climate change contribute to internal displacement in Libya? What are the impacts of such displacement on social cohesion in coastal cities? And what strategies can be employed to mitigate tensions and foster inclusive, resilient communities? Addressing these questions is not only academically significant but also has important policy implications. As climate change accelerates and migration patterns evolve, governments, international agencies, and civil

society actors will need evidence-based strategies to manage displacement in ways that promote social integration rather than division.

Ultimately, this research contributes to a broader understanding of how climate change interacts with social and political processes in fragile states. It underscores the need for integrated policy approaches that link environmental adaptation with social development and governance reform. In Libya, where the boundaries between environmental stress, conflict, and social vulnerability are increasingly blurred, such approaches are urgently needed. By highlighting the specific challenges faced by Libya's coastal cities, this study provides a foundation for more effective, context-sensitive responses to climate-induced displacement and its social consequences.

LITERATURE REVIEW
Climate-Induced Internal Displacement: Drivers and Patterns

Climate change is now widely recognized as a key driver of internal displacement, particularly in environmentally fragile regions. Extreme weather events such as droughts, floods, and desertification have intensified the vulnerability of populations living in marginal areas, often forcing them to migrate in search of safer and more stable conditions. Sambo and Rafiu (2018) identify persistent flooding, drought, and land degradation as the most influential environmental triggers leading to displacement in both urban and rural contexts. Their findings highlight that internal migration is not simply a natural consequence of climate variability but is shaped by socio-political vulnerability and lack of resilience infrastructures (Sambo & Rafiu, 2018).

Molla et al. (2021) studied displacement in coastal Bangladesh and observed that 89% of displaced persons relocated to urban areas. Although access to basic services improved, most displaced individuals experienced diminished occupational status, loss of identity, and weaker social networks—underscoring the mixed consequences of unplanned migration (Molla et al., 2021).

Displacement and the Fragility of Urban Social Cohesion

Rapid urban migration driven by environmental crises often results in profound disruption of urban social cohesion. Castells-Quintana and McDermott (2019) show that climate shocks such as flooding cause surges in urban population growth, which in turn correlate with spikes in social unrest. The authors conclude that urban environments strained by displacement are more prone to conflict and institutional breakdown (Castells-Quintana & McDermott, 2019).

In a post-displacement study in Rajshahi City, Rahman et al. (2022) found that climate migrants settled in urban slums remain socioeconomically excluded and face limited access to education, secure housing, and formal employment. These conditions hinder their ability to integrate and contribute to community-building efforts (Rahman et al., 2022).

Host-Displaced Relations and Competition for Resources

Tensions often arise between host communities and displaced populations when essential resources—such as jobs, housing, and healthcare—become scarce. Jayakody et al. (2022), in a multi-country study, identified several critical friction points that reduce social cohesion: competition for services, economic exclusion, and perceived inequity in aid distribution. They propose eight practical strategies for promoting cohesion, including integrated service delivery and designing the built environment to encourage positive interaction (Jayakody et al., 2022).

In a similar vein, Baú (2024) discusses how social cohesion is not only challenged between displaced and host groups, but also within displaced communities themselves. She emphasizes the need for communication-centered programs that build trust and reduce internal fractures among marginalized populations (Baú, 2024).

The Politics of Identity and Legal Recognition

Mukaddim and Hossain (2021) highlight the critical importance of identity formation and legal status in urban adaptation. In their study on displaced people in Khulna, they note that individuals lacking official recognition as "climate migrants" remain invisible to state institutions, making it harder to claim basic services and rights. Without clear legal frameworks, displaced populations are left vulnerable to exclusion and exploitation (Mukaddim & Hossain, 2021).

Furthering this discourse, Draper (2018) argues from a normative justice perspective that states bear responsibility for climate-induced displacement and should develop asylum and support mechanisms—even for internal displacement—based on principles of equity and accountability (Draper, 2018).

Social Capital and Post-Displacement Urban Integration

Shaw and Saharan (2018) explore the impact of displacement on social capital in the context of urban resettlement. Their research in Kolkata found that communities who relocated into government housing lost access to traditional support networks, leading to feelings of isolation and diminished community trust. These findings suggest that even well-planned relocations must account for the social architecture of communities to ensure successful integration (Shaw & Saharan, 2018).

A more structural critique is offered by Kelley et al. (2021), who argue for a "cumulative socionatural displacement" framework. They highlight how climate-induced migration is not merely a reaction to sudden events, but the culmination of long-term historical, political, and ecological inequalities. This lens is particularly relevant for Libya, where decades of authoritarian governance, marginalization, and now climate stress converge to produce displacement in deeply embedded ways (Kelley et al., 2021).

METHOD

This study adopts a qualitative research design to explore how climate-induced internal displacement affects social cohesion in Libya's coastal urban areas. The qualitative approach

was chosen to capture the depth and complexity of lived experiences, perceptions, and social dynamics that are not easily quantifiable. Specifically, this research relies on semi-structured interviews, focus group discussions, and field observations to gather rich, contextual data from both displaced individuals and host community members.

The study was conducted in three coastal cities—Tripoli, Misrata, and Benghazi—which have experienced significant inflows of internally displaced persons (IDPs) due to environmental degradation and drought in the country's interior regions. Participants were selected using a purposive sampling strategy to ensure representation from various stakeholder groups, including IDPs living in formal camps, informal settlements, and private accommodations, as well as host community members, local civil society actors, and municipal officials.

In total, 30 in-depth interviews were conducted: 12 with IDPs, 10 with host community residents, and 8 with local officials or NGO workers. In addition, 3 focus group discussions (FGDs) were held—one in each city—comprising 6–8 participants with mixed backgrounds to encourage diverse perspectives. The interviews and FGDs explored themes such as perceptions of community trust, access to public services, social tensions, livelihood challenges, and integration efforts.

All interviews were audio-recorded (with participant consent), transcribed verbatim, and analyzed using thematic analysis. Coding was conducted manually and organized into thematic categories aligned with the study's objectives. Ethical approval was obtained through a local partner institution, and informed consent was secured from all participants, with anonymity and confidentiality guaranteed.

The methodological approach is designed to generate grounded insights that reflect the social realities of displacement and cohesion in Libya's volatile urban landscape.

RESULTS AND DISCUSSION
Climate Stressors and Patterns of Displacement

Libya is increasingly experiencing the devastating impacts of climate change, including prolonged droughts, extreme heatwaves, coastal flooding, and land degradation. These environmental stressors have rendered large parts of the interior uninhabitable, triggering population movements towards urban coastal areas. One of the most catastrophic examples is Storm Daniel in 2023, which caused massive flooding and dam collapses in Derna, leading to the displacement of thousands of residents. Scientific analysis has confirmed that climate change increased the likelihood and intensity of such storms, making environmental hazards a critical driver of displacement in Libya.

The data collected from humanitarian agencies and internal displacement monitoring programs indicates that most internally displaced persons (IDPs) originate from environmentally stressed inland regions. Their migration to cities like Tripoli, Misrata, and Derna is often motivated by the search for safety, better water access, and economic opportunities. However, this movement typically occurs outside formal state planning or regulation, which complicates coordination and service delivery.

Spatial Concentration in Coastal Urban Zones

The majority of climate-displaced populations in Libya settle in coastal cities, which have historically served as political and economic hubs. These urban areas already face infrastructure deficits due to years of civil conflict and underinvestment. The influx of displaced populations adds considerable pressure on housing, water systems, sanitation, and public transportation. In Misrata and Tripoli, makeshift settlements and overcrowded housing units have become the norm for many IDPs.

Between 2017 and 2023, Libya saw a significant increase in the number of environmentally displaced individuals. With political violence declining post-2021, environmental displacement has become the primary source of population mobility within the country. This demographic shift has altered the socio-spatial landscape of cities, often leading to the informal expansion of urban boundaries into marginal lands without adequate planning.

Living Conditions and Resource Competition

Living conditions for IDPs are generally poor, with many lacking access to safe drinking water, electricity, and healthcare services. In informal settlements, sanitation facilities are often non-functional, and public infrastructure is either absent or severely limited. These challenges contribute to increased health risks, particularly the spread of waterborne diseases and respiratory illnesses.

As IDPs attempt to integrate into local labor markets, competition over low-skilled jobs has become increasingly visible. Native urban residents often perceive newcomers as economic threats, especially when they are willing to work for lower wages. This competition fuels xenophobia and social polarization, undermining efforts to build inclusive communities.

Psychological Distress and Social Exclusion

The psychological burden of displacement is significant. Interviews conducted with IDPs reveal high levels of anxiety, depression, and trauma, particularly among women and young people. The abrupt loss of homes, livelihoods, and social networks has profound mental health implications, which are compounded by the absence of formal psychosocial support services.

Social exclusion further exacerbates this distress. Many IDPs report experiencing discrimination in their new communities and feeling unwelcomed by host populations. Without formal recognition or legal status, their access to public services remains limited. Consequently, many rely on kinship ties or tribal networks, which are not always accessible or sufficient for long-term integration.

Local Initiatives and Social Cohesion Strategies

Despite the challenges, some municipalities and civil society organizations have initiated programs to promote integration and social cohesion. In Misrata, joint vocational training programs have brought together displaced individuals and host community

members, facilitating mutual understanding and reducing stereotypes. These initiatives have led to the emergence of new social networks and livelihood partnerships.

In Benghazi, community water projects involving both IDPs and residents have been successful in fostering collective ownership of infrastructure and promoting solidarity. Although small in scale, these initiatives demonstrate that, under the right conditions, displacement can serve as a catalyst for building inclusive urban resilience.

Governance Vacuum and Legal Invisibility

One of the most critical challenges in addressing climate-induced displacement in Libya is the absence of a national legal framework that recognizes and protects displaced populations. Without official recognition, IDPs are excluded from formal aid mechanisms, housing assistance programs, and participatory urban planning processes. This legal invisibility severely limits their ability to access justice, education, and social protection.

Moreover, Libya's fragmented governance structures hinder the implementation of coordinated responses. In many cases, local authorities lack the mandate or resources to address displacement issues, leaving civil society and international organizations to fill the gap. However, their interventions are often project-based and short-term, lacking sustainability and scalability.

The Case of Derna: Catastrophe and Community Response

The flooding of Derna in September 2023 represents an extreme but illustrative case of the intersection between climate change, infrastructure collapse, and displacement. The failure of two dams, compounded by heavy rainfall and poor maintenance, resulted in over 5,000 fatalities and displaced more than 40,000 residents. The immediate community response was marked by solidarity and spontaneous mutual aid efforts, with families opening their homes to survivors.

However, tensions quickly arose as aid distribution was perceived as unequal, and allegations of corruption and favoritism undermined trust in local authorities. This case underscores the need for transparent governance and equitable resource allocation in post-disaster contexts to preserve social cohesion and avoid future unrest.

Intergroup Trust and Long-Term Resilience

Intergroup trust between host communities and displaced populations is a key factor in achieving long-term resilience. Findings suggest that where IDPs are included in decision-making processes and given equitable access to services, the potential for social conflict decreases. Participatory planning, shared economic activities, and community dialogues have shown positive outcomes in mitigating mistrust.

In contrast, in neighborhoods where displaced populations are excluded or treated as a burden, resentment festers, leading to stigmatization and sometimes violence. Building inclusive resilience requires not only physical infrastructure but also strong institutional frameworks that promote civic engagement and human rights.

Town Planning and Urban Adaptation

Urban adaptation to climate change in Libya is still in its infancy. While some municipalities have begun integrating displacement data into city planning—such as adjusting zoning regulations and upgrading water distribution systems—these efforts are often underfunded and uncoordinated. There is a need for systemic urban policies that address both climate adaptation and displacement simultaneously.

This includes promoting climate-resilient infrastructure, expanding affordable housing, and developing early warning systems that prioritize vulnerable populations. Without such measures, Libya's coastal cities will remain fragile spaces of emergency shelter rather than thriving centers of social renewal.

CONCLUSION

This study has examined the complex relationship between climate-induced internal displacement and social cohesion in Libya's coastal cities, with a particular focus on Tripoli, Misrata, and Benghazi. As Libya confronts rising environmental stressors—including prolonged drought, flash floods, and desertification—its interior regions are becoming increasingly uninhabitable. These conditions have driven large-scale internal migration toward coastal urban centers, which are perceived to offer better access to water, infrastructure, and economic opportunities. However, these cities are simultaneously facing structural weaknesses, underdeveloped services, and limited governance capacity, which together undermine their ability to absorb displaced populations effectively.

The findings demonstrate that climate-driven displacement exacerbates existing vulnerabilities in urban systems and significantly disrupts social cohesion. Displaced people often face substandard living conditions, limited access to services, and social exclusion. Host communities, in turn, perceive the influx of newcomers as a strain on already inadequate resources, generating resentment and competition. This dynamic contributes to a breakdown in trust, increases social tensions, and undermines efforts to foster inclusive urban societies.

Mental health distress, informal labor exploitation, and exclusion from planning processes further marginalize displaced individuals. The lack of legal recognition for climate-displaced persons in Libya means they often fall outside formal assistance frameworks, intensifying their vulnerability. Simultaneously, the fragmentation of national governance has hindered the development of coordinated, evidence-based responses to the evolving displacement crisis.

Despite these challenges, the research also identified examples of local resilience and social innovation. Municipal authorities, civil society organizations, and community-led initiatives have, in some cases, succeeded in facilitating shared services, joint livelihood activities, and platforms for dialogue between displaced and host communities. These efforts, although limited in scope, demonstrate that social cohesion can be preserved and even strengthened through inclusive, bottom-up approaches—particularly when supported by trusted local institutions.

To address this urgent and growing challenge, Libya must take strategic steps toward building a coherent national policy framework for climate-induced displacement. This includes legal recognition of affected populations, investment in urban infrastructure and service delivery, and the empowerment of municipal actors as frontline responders. International partners can support these efforts through technical assistance, funding, and knowledge-sharing mechanisms.

In conclusion, climate change is not only an environmental threat but also a profound social stressor. Without timely intervention, internal displacement in Libya will continue to fragment urban communities and hinder recovery from conflict. However, with proactive governance, inclusive planning, and sustained local engagement, Libya's coastal cities can serve not only as destinations of survival but as spaces of renewal—where displacement becomes an opportunity for social resilience, not division.

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