



Forced mobility, social vulnerabilities, and resource governance in the Lake Province (Chad): The case of Bagasola

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Abstract - Since 2014, the Bagasola region in Chad has been experiencing a multidimensional crisis marked by massive displacement due to Boko Haram attacks (56.5%) and natural disasters (32.5%). More than 7,400 people have been displaced, doubling the local population and exerting intense pressure on already fragile natural resources. Humanitarian aid dependency is high, with 49.5% of households receiving assistance, though only 32.5% benefit from regular support. The majority of households live in precarious shelters (81.5% in straw structures), and access to farmland is limited-20.5% of respondents report having no access to land. Only 15.5% of households engage in fishing, and 33% of refugees lack access to pastures, highlighting deep marginalization. Land commodification has intensified, with 79.5% of households having access to cultivable land, yet 20.5% remain excluded. Social and land-related tensions are on the rise, exacerbating the vulnerability of displaced and refugee populations. These findings underscore the urgent need for inclusive and sustainable management strategies that integrate land rights, social cohesion, and environmental resilience to address the complex challenges in this strategic zone of the Lake Chad Basin.

Index Terms - Insecurity, forced mobility, social impact, natural resources, social cohesion, Lake Province, Bagasola, Chad

I. INTRODUCTION

Since 2014, the Lake Province, located in the far west of Chad, has been the site of a prolonged and asymmetrical conflict triggered by attacks from the armed group Boko Haram, which became the Islamic State in West Africa Province (ISWAP) in 2015 [1], [2]. This region, historically marginalized and vulnerable to climatic risks, has rapidly turned into a multidimensional crisis zone—security, humanitarian, and ecological [3], [4].

The conflict has led to massive population movements, with over 450,000 internally displaced persons (IDPs) recorded in the Lake Province since the insurgency began [5], [6]. According to data from the International Organization for Migration (IOM), the sub-prefecture of Bagasola has become one of the main reception centers for IDPs, returnees, and refugees from the Lake Chad islands and border areas with Nigeria, Niger, and Cameroon [7], [8]. This is due to Bagasola's strategic location, relatively secure access thanks to Chadian military presence, and the concentration of humanitarian infrastructure [9].

However, this influx places intense pressure on already fragile natural resources, especially farmland, pastures, and fishing zones [10], [11]. The Lake Chad Basin's ecosystems—already threatened by climate change—are undergoing accelerated degradation due to overexploitation linked to the growing needs of displaced and host populations [12], [13]. Lake hydrological fluctuations, combined with population growth, exacerbate resource competition, sparking recurring conflicts among farmers, fishers, and herders [14], [15]. On the socio-economic front, the massive arrival of displaced persons disrupts local structures of production, access to employment, and public services. Agro-pastoral activities—the main sources of income in the province—are severely affected by insecurity, loss of access to fertile lands, and disrupted trade routes [16], [17]. Many villages have been abandoned or destroyed, leading to the breakdown of traditional social networks and loss of community self-organization [18].

Coexistence between host and displaced populations also fosters social tensions, particularly over land and access to essential services (water, health, education) [19], [20]. Customary land management norms—often informal—are increasingly challenged by new settlement dynamics in the absence of effective legal frameworks to secure displaced persons' land rights [21], [22].

On the humanitarian side, despite efforts by the Chadian government, UNHCR, IOM, and international NGOs, aid remains insufficient given the growing needs [23]. Recent surveys show that over 50% of displaced households in the region lack regular

access to food aid or adequate health coverage [24]. Persistent precariousness drives short-term survival strategies, often at the expense of environmental and social sustainability [25].

This situation highlights the interconnected nature of security, climate, and humanitarian crises in the Lake Chad Basin. Experts advocate for integrated and resilient approaches grounded in sustainable resource management, strengthened social cohesion, and inclusive land policies [26], [27].

II. LITERATURE SURVEY

This study adopts a mixed-methods approach, combining both qualitative and quantitative methods within a hypothetico-deductive framework. The primary objective is to analyze mobility dynamics, strategies for accessing natural resources, and forms of food insecurity in the sub-prefecture of Bagasola.

2.1. Location

Bagasola is a sub-prefecture in the Lake Province of Chad, located 45 km of Liwa and 75 km from Bol, the provincial capital. It is accessible via the main road linking these two towns. Its geographical coordinates are 13°32'18" N and 14°18'46" E. Positioned at the heart of the Lake Chad region, Bagasola occupies a strategic area in terms of population mobility and natural resource management, making it a key point in local socio-economic and environmental dynamics.

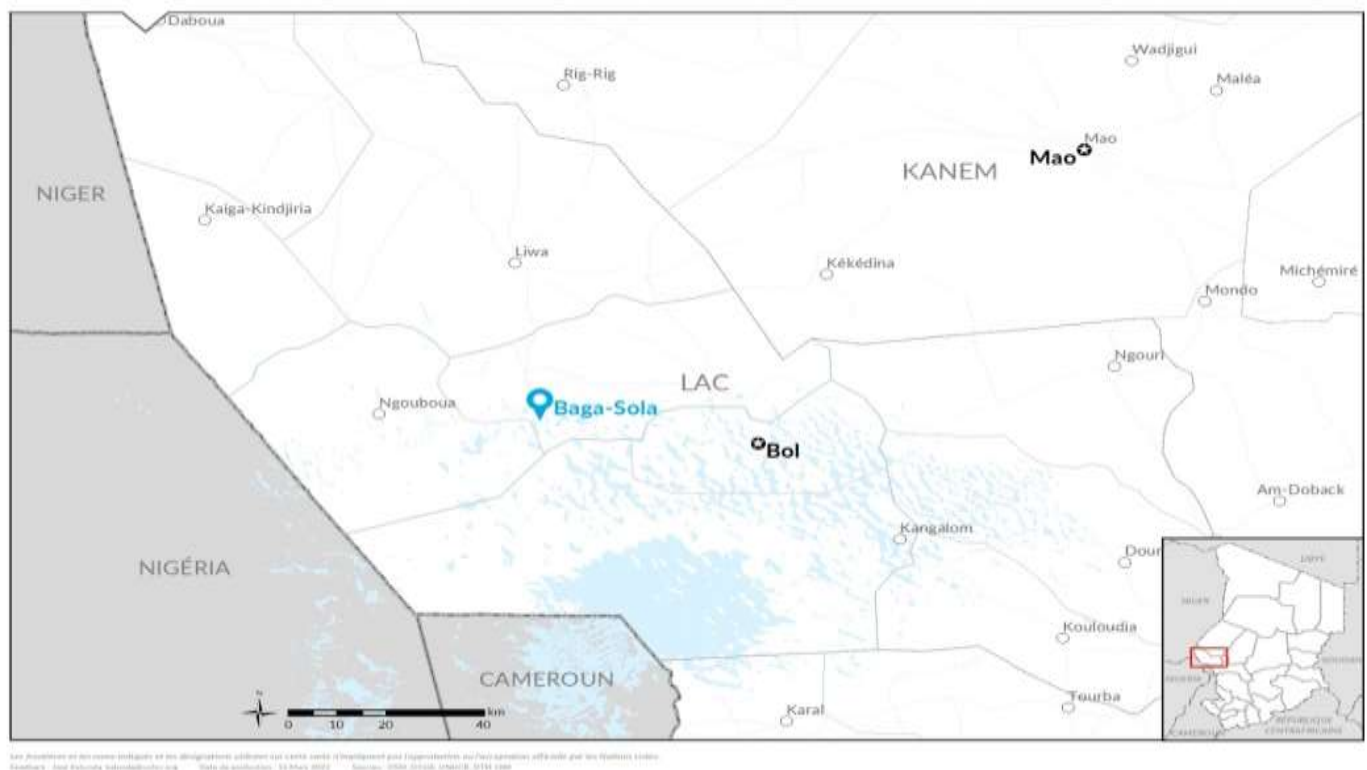


Figure 1: Map showing the location of the sub-prefecture of Bagasola

2.2. Data Collection

Primary data were collected in the field using four complementary techniques: semi-structured surveys with internally displaced persons (IDPs), returnees, refugees, and host community members; direct observations to understand living conditions and daily practices; stratified focus group discussions by gender and age; and individual interviews with institutional actors, including traditional leaders, administrative authorities, and NGO representatives.

Secondary data were gathered from various documentary sources (reports, academic publications, institutional documents) available in documentation centers in N'Djamena and Bagasola, as well as on digital platforms. These sources enriched the theoretical framework and supported the development of tools adapted to field conditions.

A purposive sample of 200 individuals was established to reflect the diversity of the groups concerned: 80 IDPs, 40 returnees, 30 refugees, 50 host villagers, and 19 institutional actors. The sample distribution was adjusted according to local demographic realities. The data collection was conducted over a five-week period, from June 5 to July 6, 2025. A thematic map accompanies the study to visualize the geographical distribution of survey sites.

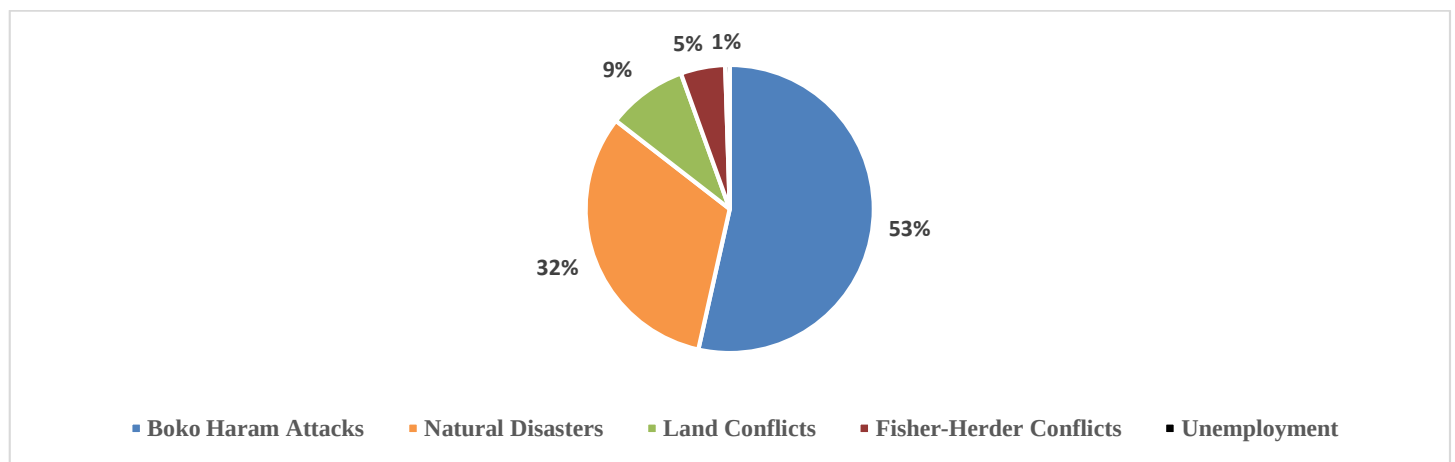
III. Results

3.1. Dynamics of forced mobility

Since 2014, the population of Bagasola has doubled, intensifying the exploitation of natural resources and increasing mobility toward other areas. Boko Haram attacks have displaced more than 7,400 people, exerting additional pressure on fragile resources.

3.1.1. Main causes of displacement

In the sub-prefecture of Bagasola, large-scale population displacements result from a combination of interrelated factors. Data collected in the field highlight the significant role of chronic insecurity, as well as environmental factors, in shaping migration dynamics in the region. Figure 2 below illustrates this situation.



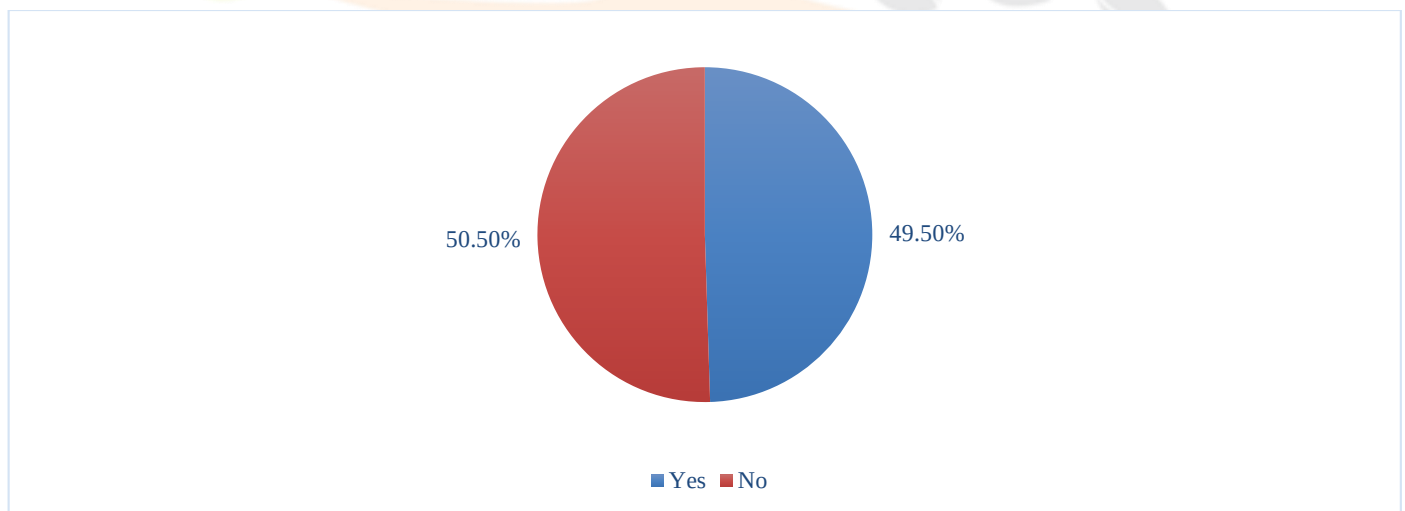
Source: Field survey, May 2025

Figure 2: Distribution of causes of displacement

According to Figure 2, insecurity—particularly linked to Boko Haram—is the leading cause of displacement, accounting for 56.5%. Natural disasters represent 32.5%, followed by land conflicts (9%), tensions between fishers and herders (5%), and unemployment (0.5%). This multifaceted instability deeply affects living conditions and increases reliance on aid.

3.1.2 – Irregular and insufficient humanitarian aid

The displaced populations' dependence on humanitarian aid is increasing due to the loss of their livelihoods and the fragility of their economic environment. Data collected in Bagasola highlight a concerning situation regarding humanitarian coverage. Figure 3 below illustrates this issue.



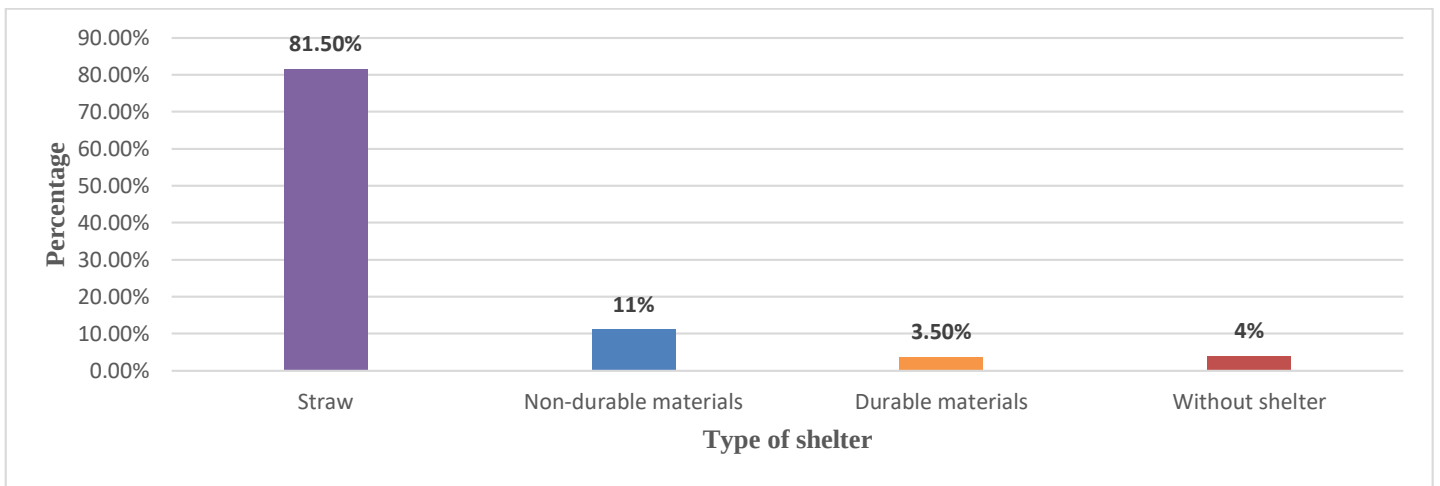
Source: Field survey, May 2025

Figure 3: Access to humanitarian aid among displaced households

Survey results show an almost even split: 49.5% of households receive humanitarian aid, while 50.5% receive none. The distribution is reported to be irregular: only 32.5% of households benefit from monthly support, while others receive aid every two to three months or not at all. This situation reflects a poor distribution of aid and an inability to sustainably cover food and basic needs.

3.1.3 – Precarious housing conditions for displaced populations

Housing is another major indicator of vulnerability among displaced persons. In the Bagasola region, most displaced families live in precarious conditions, revealing the scale of the humanitarian crisis.



Source: Field survey, May 2025

Figure 4: Types of shelters occupied by displaced households

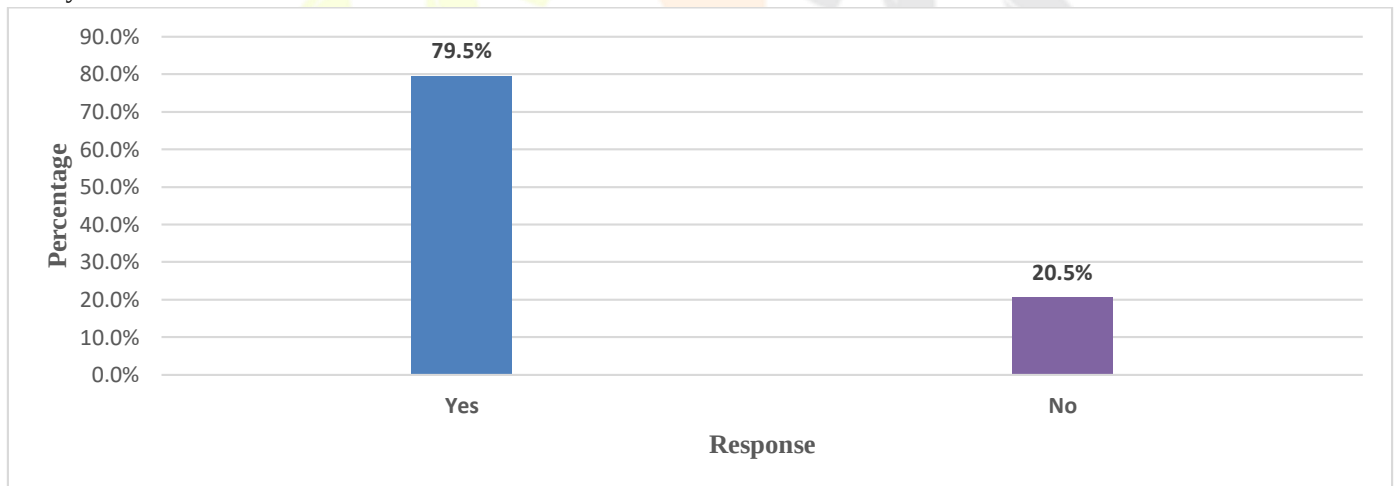
Figure 4 shows that 81.5% of households live in straw shelters, 11% in metal sheet houses, and only 3.5% in solid houses. Additionally, 4% have no shelter at all. These figures indicate extreme housing insecurity, closely linked to poverty and forced displacement.

3.2 – Reconfiguration of access to natural resources

In Bagasola, demographic growth is intensifying pressure on natural resources, leading to overexploitation and land saturation. The commodification of access to land, fishing, and grazing areas marginalizes displaced populations. Customary systems are being overwhelmed, and the lack of regulation exacerbates social conflicts.

3.2.1 – Land pressure and commodification of farmland

In the sub-prefecture of Bagasola, access to agricultural land was traditionally based on customary practices such as inheritance or allocation by traditional authorities. Since 2015, the security crisis and the massive arrival of displaced persons have disrupted these mechanisms, resulting in increased land pressure. New modes of land acquisition—such as rental, purchase, or sharecropping—have emerged, promoting the commodification of land. This evolution, often unregulated, has triggered tensions and conflicts, especially in host areas. Displaced persons, with no recognized land rights, face persistent land insecurity, jeopardizing both their access to farmland and their socio-economic stability. Figure 5 below presents the distribution of responses regarding access to arable land in the study area.



Source: Field survey, May 2025

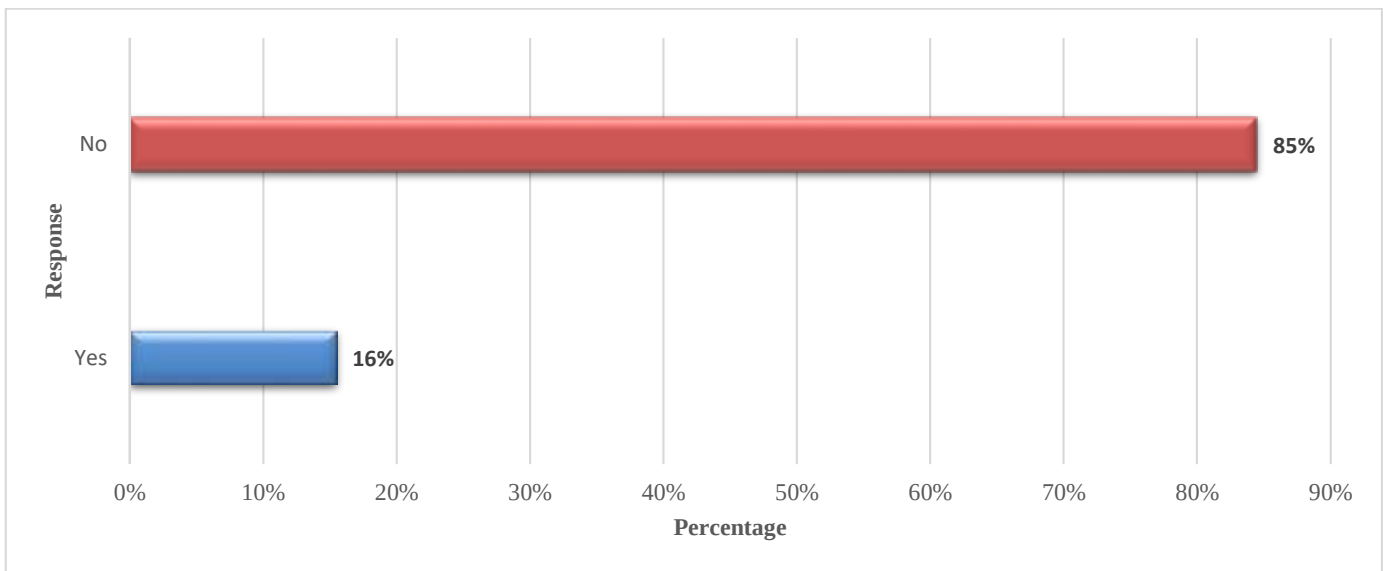
Figure 5: Distribution of households according to access to arable Land

The data show that 79.5% of surveyed households report having access to arable land, while 20.5% say they have none. This significant portion of landless individuals mainly includes vulnerable groups, particularly refugees from Niger and Nigeria, who lack the customary rights required to cultivate agricultural land.

The results reveal a structural inequality in land access, worsened by the absence of institutional regulatory mechanisms. This generates social tensions and undermines the stability and cohesion of overcrowded host areas.

3.2.2 – Fishing: A marginalized activity

Once freely accessible, fishing in Bagasola is now restricted due to the occupation of many fishing zones by Boko Haram. With secure areas now limited, fishermen from outside the region must obtain authorization from traditional leaders, usually in exchange for in-kind or material contributions. Figure 6, based on the field survey conducted in June 2023, illustrates households' perceptions regarding their engagement in fishing activities in the sub-prefecture of Bagasola.



Source: Field survey, May 2025

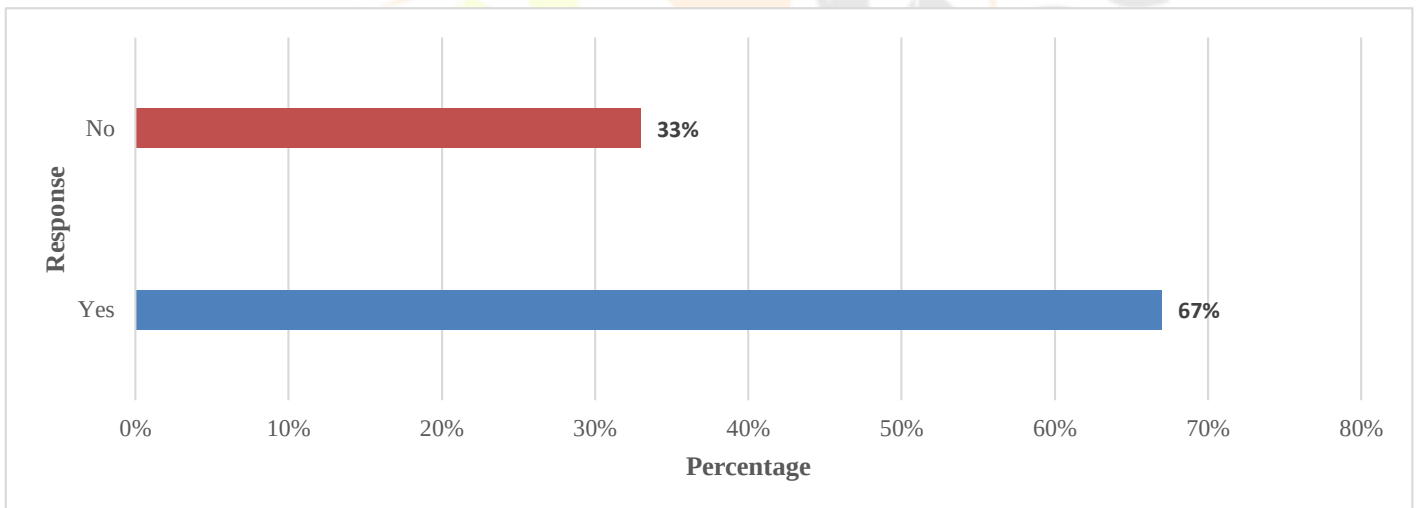
Figure 6: Percentage of households practicing or not practicing fishing

Figure 6 shows that only 15.5% of respondents report practicing fishing, while 84.5% state they do not have access to it. This large majority reflects the increasing marginalization of an activity that is nevertheless essential for food security and household income for communities living along the lake.

Restricted access, conflicts between local fishermen and newcomers, and ongoing insecurity in lake areas severely limit fishing activity—particularly for displaced persons and non-locals.

3.2.3 – Privatized pastures and exclusion of displaced herders

Previously free and communally managed according to customary norms, access to pastureland in Bagasola has been disrupted by the security crisis and the massive influx of displaced persons. It is now subject to authorization and monetized, with herders required to obtain permission from traditional leaders or landowners and pay a fee—often in kind. This shift reflects growing pressure on resources and the gradual privatization of formerly communal pastoral spaces. Figure 7, based on the field survey conducted in June 2023, illustrates households' perceptions regarding access to livestock farming.



Source: Field survey, May 2025

Figure 7: Livestock farming practice according to surveyed households

Figure 7 shows that 67% of respondents report engaging in livestock farming, while 33% are excluded from the activity. This considerable exclusion rate reveals increasing inequality in access to this essential resource, particularly for refugees and displaced persons, especially those from Niger and Nigeria. Lacking land capital and legal recognition, these populations face social, legal, and economic barriers, exacerbating their vulnerability and hindering their integration capacity.

This situation highlights the need to rethink pasture management mechanisms by reconciling customary practices, local regulations, and equitable access to resources for all groups, including the most vulnerable.

Discussion

The findings of this study confirm the magnitude of the challenges faced by the sub-prefecture of Bagasola, linked to the ongoing security, environmental, and humanitarian crisis since 2014. The region's population has doubled since the beginning of the conflict, intensifying pressure on already fragile natural resources further stressed by climate change and overexploitation. The majority of displaced persons (56.5%) have fled Boko Haram-related insecurity, while 32.5% cite natural disasters—highlighting the intersection between human insecurity and environmental vulnerabilities [1], [2], [3].

The data reveal increased reliance on humanitarian aid, which is distributed unevenly and irregularly, thus limiting the affected population's capacity to achieve long-term self-reliance [4], [5], [6]. The precarious housing conditions—where most households live in makeshift shelters—demonstrate the social and economic fragility of the region. In terms of resource governance, the transformation of access mechanisms to land, fishing, and pastureland reflects a growing commodification, often unregulated, which fuels intercommunal tensions and marginalizes vulnerable groups, notably refugees and displaced persons [7], [8]. These dynamics underscore the urgency of adopting an integrated approach that combines sustainable resource management, secure land rights, social cohesion, and climate resilience to address the intertwined crises affecting the Lake Chad Basin [9], [10].

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Conclusion

The results of this study highlight that the crisis in Bagasola cannot be addressed from a single perspective. It is a complex phenomenon where insecurity, environmental degradation, and social vulnerability are deeply intertwined. Population growth driven by forced displacement increases pressure on precarious natural resources, fueling tensions and inequalities. Local governance must shift toward inclusive and sustainable management, integrating land rights, social protection, and climate resilience. Lastly, coordination between humanitarian, institutional, and community actors is essential to building lasting stability in this strategic region of the Lake Chad Basin.

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