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Social Cohesion in the Context of Environmental/Climate-Related Internal Displacement in Ghana

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Preface

This Discussion Paper presents results from research conducted by the German Institute of Development and Sustainability (IDOS) and the Centre for Migration Studies (CMS), University of Ghana. The research was part of the 59th IDOS Postgraduate Training Programme. The research in Ghana is part of an ongoing project on Social Cohesion in Displacement Contexts, funded by the Federal Ministry for Economic Cooperation and Development (BMZ).

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Abbreviations

AMA	Accra Metropolitan Assembly
CMS	Centre for Migration Studies (University of Ghana)
FGD	Focus group discussion
IDOS	German Institute of Development and Sustainability
IDP(s)	Internally displaced person (people)
KLERP	Korle Lagoon Ecological Restoration Project
PD	People’s Dialogue on Human Settlements
PSPL	Panbros Salt Production Limited
SDI	Slum Dwellers International
UNHCR	United Nations High Commissioner for Refugees (UN Refugee Agency)

Executive summary

Cities are one of the most important contexts for understanding social cohesion in communities affected by climate-related displacement, and are the main destination for people forced to move due to the climate crisis, especially in the Global South. However, many cities are themselves vulnerable to the impacts of climate change, leading to temporary, permanent or cyclical displacements within neighbourhoods even after displaced people settle. Social cohesion is vital in these contexts because when there is trust, cooperation for the common good and a shared sense of identity, resilience to climate change is strengthened. At the same time, efforts to enhance resilience to climate change also enhance social cohesion.

To contribute to this body of knowledge and provide evidence for policy interventions, this paper examines the relationship between climate-related displacement and social cohesion in Ghana's informal settlements in Accra, focusing on how trust, inclusive identity and cooperation manifest within communities and institutions. Additionally, it explores the role of climate-resilience efforts in shaping horizontal (community-based) and vertical (institutional) social cohesion.

In cities of the Global South, informal settlements are characterised by marginalisation and exclusion, often affecting their capacities for resilience. The study, conducted in the Agbogbloshie, Old Fadama, and Glefe settlements, highlights that climate-related events are a common experience for residents. While communities demonstrate strong horizontal social cohesion within themselves – marked by trust and mutual support – vertical cohesion with political institutions and city authorities remains weak. Social networks help members absorb climate shocks in the short term, but long-term resilience remains a challenge, raising questions about the role of the state in supporting sustainable resilience strategies in these settlements.

Our findings suggest that limited institutional resilience efforts contribute to weak vertical cohesion between neighbourhoods and city authorities, undermining collective responses to climate challenges. The research emphasises the need for a more integrated approach, whereby community-led initiatives and state interventions work together to strengthen resilience and social cohesion in Accra's informal settlements.

Based on the research findings, we recommend the following actions to government actors, donors, NGOs, community leaders and city authorities:

- To enhance resilience and social cohesion in informal urban settlements, a **multi-stakeholder approach is essential**. Government actors, donors, NGOs and community leaders must work together to address marginalisation, improve infrastructure, enhance communication and promote inclusive participation.

- For city-level actors, a key priority is **addressing the lack of basic urban services and infrastructure** by ensuring secure land tenure, upgrading essential services such as water, sanitation and hygiene, and strengthening support systems through partnerships. At the same time, **awareness and accessibility of support programmes** must be improved to ensure community members can access climate and displacement-related resources, fostering trust and cooperation.

- Effective **communication channels** are critical for strengthening social cohesion and transparency. National government actors and international donors should collaborate with local leaders to diversify information-sharing methods, adapt to community needs, and provide updates on project progress. In parallel, **inclusive community participation** should be promoted by engaging diverse groups in decision-making and increasing financial and material support for community-led initiatives.

- To build long-term resilience, **investment in skills development and livelihood support** is crucial, enabling communities to adapt to climate and environmental shocks. **Maintaining horizontal social cohesion** through strong local governance structures will ensure conflict resolution, trust-building and community solidarity, and can serve as a foundation for building greater vertical social cohesion.

1 Introduction

Climate change poses an existential threat to individuals and communities across the world. Extreme weather events such as flooding lead to forced displacement of populations to, from and within cities, exacerbating already existing challenges of the latter. This also holds true for Accra, Ghana in that expected climate change effects by 2050 include more intense storms and floods, rising surface temperatures, a sea level rise of 20 cm, and coastal erosion by an additional 150 meters (Accra Metropolitan Assembly & C40 Cities, 2020). At the same time, Accra is grappling with an annual population growth rate of 5.3% (Accra Metropolitan Assembly & 100 Resilient Cities, 2019). This rapid urban growth has effectively outpaced urban planning, resulting in insufficient service provision and repercussions for the living conditions of Accra's population (Accra Metropolitan Assembly, 100 Resilient Cities, 2019).

In Accra, 58% of the city's population live in informal settlements (Accra Metropolitan Assembly & C40 Cities, 2020). These settlements often attract low-income people, including those who have had to leave other parts of the country due to the impacts of climate change. At the same time, informal settlements are often prone to climate risks – such as floods, coastal erosion or sea-level rise. This particularly holds true in the case of Agbogbloshie, Old Fadama and Glefe, all of which are located in flood-prone zones and have experienced repeated flooding events over the past two decades (Amoako, 2016).

The significant population growth and prevailing climate risks in Accra may have implications for social cohesion. Accordingly, relying on the definition of social cohesion in Leininger et al. (2021, p.3) as "the vertical and horizontal relations among members of society and the state that hold society together" and their assertion that "social cohesion is characterised by a set of attitudes and behavioural manifestations that includes trust, an inclusive identity and cooperation for the common good", this research project sought to answer the following research questions:

a) *Research question:* How do the elements of social cohesion, trust, inclusive identity and cooperation for the common good, evolve within communities and across institutions in Accra's informal settlements?

b) *Sub-question:* What role do climate resilience efforts play in fostering or hampering vertical and horizontal social cohesion in Accra's informal settlements?

Indeed, early literature suggests a negative correlation between diversity and social cohesion, implying that arrivals of displaced people would reduce social cohesion (Alesina & Ferrara, 2005). However, recent research challenges this view, emphasising the need for nuanced analyses that consider local socio-political contexts (Myers et al. 2024). Understanding the interplay between climate-related displacement, and social cohesion as well as its multiple consequences is critical for informed policy-making and interventions aimed at fostering community resilience and well-being in the face of displacement challenges (Myers et al., 2024).

For this purpose, a qualitative approach was adopted, using focus group discussions as the primary method of data collection. The focus group discussions aimed at capturing local perspectives on (the interplay of) social cohesion and climate resilience and were, therefore, implemented in the aforementioned informal settlements of Agbogbloshie, Old Fadama and Glefe. Six focus group discussions with ten participants respectively were conducted, two in each community consisting of one all-male and one all-female group.

The research project was implemented in a collaboration between the University of Ghana's Center for Migration Studies (CMS), the NGO People's Dialogue on Human Settlements (PD), and IDOS. PD, which is affiliated with the global network Slum Dwellers International (SDI), played a facilitating role in providing access to the communities and interviewees in the selected informal settlements. Researchers from CMS were involved in the data collection and analysis.

This discussion paper is structured as follows: literature review, the theoretical background for the research, research design and methodology, findings and discussion, and conclusions and recommendations to close.

2 Research context and literature review

2.1 Urban displacement in the context of climate change and environmental degradation

In the coming decades, the importance of displacement and mixed migration with a particular focus on fragile and vulnerable states is going to increase (Martin-Shields, 2017). Terms that describe perspectives and situations of people who are affected by climate change hazards and are forced to move often include displacement, eviction, dislocation, involuntary resettlement or relocation (Agrawal & Redford, 2009). In this study, we use the term "displacement", defined by the International Organization for Migration, as

> the movement of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters" (IOM, 2019, p. 55).

In this study, we focus on internal displacement in the context of climate change or environmental degradation.

The impacts of climate change on displacement manifest through sudden events such as flooding and cyclones, or through slow-onset events like sea level rise, rising temperatures, coastal erosion and drought (Black et al., 2011). It is important to note that climate/environmental factors interact with demographic, political, social and economic factors to generate increased human mobility (Black et al., 2011). Key trends concerning Ghana's climate future include rising temperatures, especially rapid in the north of the country, heavier rainfall resulting in flash floods and flooding, and more climate-related hazards. These anticipated climate events will further put pressure on urban contexts (World Bank Group, 2021). More and more Ghanaians move to Accra for a plethora of reasons, including climate-induced displacement and greater job opportunities. People from northern Ghana are experiencing more severe droughts, and because of the drought and its effects many decide to move to Accra (World Bank Group, 2021). Besides droughts, Ghanaian regions are affected by heavy rainfalls and flooding, leading to displacement (Lusigi, 2022).

Internally displaced persons (IDPs) face numerous challenges, such as economic instability, marginalisation, limited rights and uncertain futures (Etzold et al., 2022; Martin-Shields, 2024). Internal displacement in *urban contexts* deepens these challenges. In most cities of the world, displaced people are not as visibly separated from their host communities compared to the situation of displaced people in camps (Montemurro et al., 2010). This holds true for Accra, where most displaced people live in informal settlements. IDPs may face exclusion, especially when they inhabit informal settlements (Ouma et al., 2024), and informality has implications for the provision of (development) aid and the access to land or vulnerability to evictions (Crisp et al., 2012).

Much of the evidence on policy-based solutions shows a high failure rate when it comes to addressing the needs of displaced people. Rather than offering a broad range of options, these solutions tend to be limited, leaving internally displaced persons (IDPs) to rely on their personal networks for "protection, shelter, livelihood support, a sense of belonging, and opportunities to migrate elsewhere" (Etzold et al., 2022, p. 2). Community-based organisations or other people's

connections often stretch across regional or national borders (Etzold et al., 2022). Therefore, policy-makers need to be informed about responses to interminable displacement to comprehend “the needs and the local, trans-local and transnational ties” (Etzold et al., 2022, p. 2) of IDPs, and to create sustainable solutions.

Additionally, international organisations such as UNHCR struggle with contacting both local authorities *and* displaced people in urban contexts. These challenges make governments and humanitarian organisations hesitant to deal with displacement and provide aid in urban contexts (Crisp et al., 2012). Urbanisation further aggravates this treatment as authorities are ill-prepared for ongoing flows of newcomers to cities (Crisp et al., 2012). In cities, access to land is especially difficult for displaced people. As we will see in the next section, this is the case in Accra, where the mix of state-owned land, traditional land and private ownership leaves displaced people vulnerable to eviction, which is perceived as a daily threat by many displaced people living in Accra (SDI, 2012).

Urban challenges in Accra: Climate risks compounding social marginalisation

Climate risks in Accra are magnified by deficits in effective urban planning. Several characteristics define the city: traffic is intense, house and building construction is booming and the living situations of many are precarious. Cobbinah and Darkwah (2017) conclude that urban planning practices in Ghana are insufficient to address the functional needs of the city population. Cobbinah and Finn (2023, p. 371) speak of an “unsuccessful implementation of strategic spatial planning and absence of proactive planning”. Blaming dominant political elites with no experience in urban planning for chaos and blight in Accra, they describe the weak position of urban planning agencies in the country.

State agencies do not integrate local knowledge and initiatives in their planning efforts (Cobbinah & Finn, 2023). Often political elites engage in urban planning to strengthen their position and power. Developments in Ghana, according to Agyemang et al. (2019), often take place without planning permission. Ghanaian governments tend to ignore the Town and Country Planning Ordinance in terms of financial and human resources. Additionally, the formal political structures marginalise urban residents in contributing to urban planning decision-making. Corruption, rapid urbanisation, poor sanitation and transportation have a particularly acute effect on the precarious situation in Accra’s informal settlements.

However, the constant growth of informal settlements makes them crucial for the city’s economy. The majority of Accra’s population create their livelihood in these settlements, even if they do not live in them. Agyemang et al. (2019) describe city-regions in Sub-Saharan Africa as inefficient and unsustainable, including the Greater Accra Region. For Cobbinah and Darkwah (2017), both the traditional and the formal political system contributed to inadequate urban planning in Ghana. As displacement is increasingly driven by environmental/climate-related events, the expansion of urban populations and climate change further challenge urban planning practices in Ghana (Cobbinah & Finn, 2023). This leads to a negative feedback loop as cities in Sub-Saharan Africa frequently experience flooding, heatwaves, sea-level rise and saline intrusions. These climate events disproportionally affect fragile informal settlements, which are where people displaced by climate change settle. To address this cycle, urban planning must adapt accordingly (Cobbinah & Finn, 2023).

The interplay of displacement and urban and environmental challenges is a rich space for a better understanding of how social cohesion evolves in urban displacement contexts. We do not seek to prove causality in terms of climate/environmental impacts and displacement but rather to derive insights into how social cohesion manifests in the urban context, where people with varying experiences of climate displacement tend to be located. We also seek to better understand the relationship between resilience and social cohesion in climate/environmental displacement contexts.

3 Conceptual background

3.1 Social cohesion

Social cohesion influences multiple dimensions of political and economic life, such as political participation and the establishment of functional markets. Societies with high social cohesion are more resilient in the face of crises because cooperation and strong relations between societal groups allow them to effectively respond to and recover from shocks (Myers et al., 2024). This increasingly makes social cohesion a major issue for development actors. Displacement, whether due to conflict, environmental factors or other causes, has profound implications for social cohesion, both among displaced individuals and host communities (Myers et al., 2024).

Moreover, the impact of displacement extends beyond the directly affected individuals to the host communities that come into contact with the displaced population. The dynamics of social cohesion in host communities are influenced by factors such as diversity, in-group identification, and political preferences (Myers et al., 2024). The impact of displacement on social cohesion extends to host communities, with early literature suggesting that the influx of refugees would have a negative impact on social cohesion (Alesina & Ferrara, 2005).

Recent research challenges this view, emphasising the need for nuanced analyses that consider the scale and quality of local interactions. Understanding the interplay between displacement, and social cohesion, and its multiple consequences is critical for informed policy-making and interventions aimed at fostering community resilience and well-being in the face of displacement challenges (Myers et al., 2024).

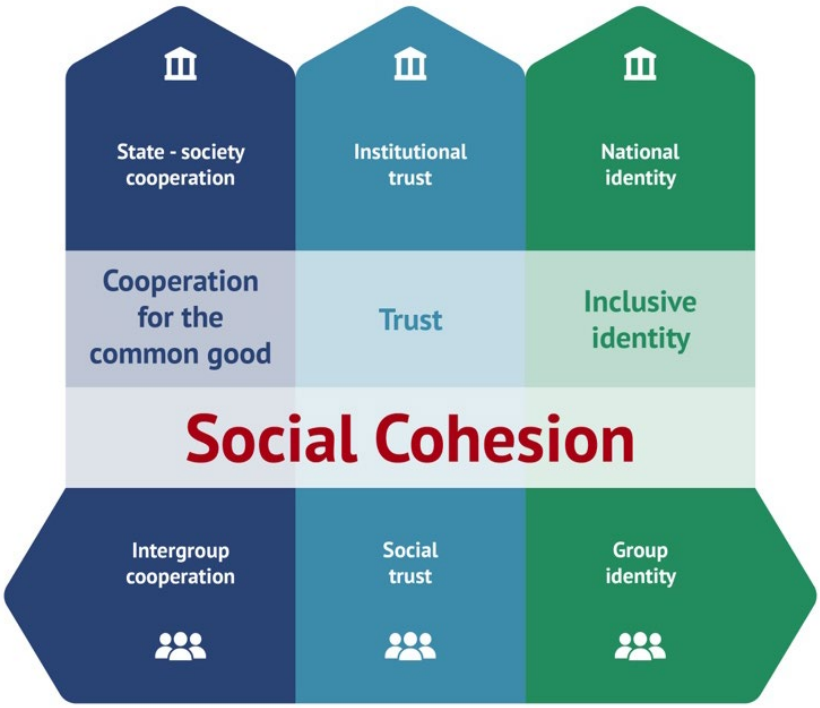
3.2 Definitions of social cohesion

To analyse the relations between social cohesion and forced displacement in our research, we utilise the comprehensive definition of social cohesion by Leininger et al. (2021), whereby:

> Social cohesion refers to the vertical and horizontal relations among members of society and the state that hold society together. Social cohesion is characterised by a set of attitudes and behavioural manifestations that includes trust, an inclusive identity and cooperation for the common good. (Leininger et al., 2021, p. 3)

In this conceptualisation, social cohesion relates to the complex interplay of relationships between members of society and the state. Leininger et al. (2021) describe both a vertical and a horizontal dimension, within which the interactions are taking place. The former includes the relations between society and the state, while the latter focuses on the interactions within society, within a specific group and between groups.

Figure 1: Social cohesion framework



Source: Leininger et al. (2021)

3.2.1 Inclusive identity

Our definition revolves around three fundamental pillars of social cohesion: inclusive identity, trust and cooperation for the common good. The first key attribute underlines the need for a society "which allows different social identities to coexist and offers more than just a sense of belonging or joint identity" (Leininger et al., 2021, p. 5). The authors emphasise social identities over personal ones, acknowledging the shared understanding individuals hold for specific social groups and their emotional significance. Within a society, there exists a complex system of parallel and overlapping identities, encompassing both superordinate and subordinate identities. Inclusivity facilitates the coexistence of these social identities at both individual and societal levels. Social cohesion increases when both superordinate and subordinate groups can coexist through inclusive compatibility. However, patterns of intersection or dominance hold the potential to diminish inclusion and, consequently, social cohesion. (Leininger et al., 2021)

3.2.2 Trust

Trust is the second central attribute of social cohesion and can be divided into three distinct types, two of which are important to our social cohesion definition. Particularised trust pertains to trust within specific groups such as one's own family, neighbours and identity groups. Generalised trust refers to the ability to trust people beyond one's immediate circles and is therefore also known as "bridging" trust. It extends across various societal dimensions such as economic and ethnic groups. The third type is institutional trust, which operates at a vertical level and focuses on citizens' trust in formal organisations of the state. It does not mean the trust felt towards specific incumbents but rather the underlying trust in the institutions in general.

3.2.3 Cooperation for the common good

The third and last essential aspect of social cohesion focuses on cooperation among different groups and between individuals. To be an indicator of social cohesion this cooperation needs to be oriented toward the common good and therefore to transcend individual interests. An assessment of social cohesion focuses less on people's willingness or commitment to cooperate and more on the actual manifestation of cooperation. The inclusion of the common good, with its normative and procedural dimensions, adds a valuable perspective to the conceptualisation of social cohesion, emphasising the importance of tangible cooperative behaviours at the individual, group and national levels (Leininger et al., 2021).

3.2.4 Connections between the three pillars

The three pillars of social cohesion in our definition – inclusive identity, trust and cooperation for the common good – are connected in a dynamic and mutually reinforcing process. Trust and an inclusive identity can together foster an environment conducive to cooperative action for the common good. Additionally, when people identify strongly with their group while remaining inclusive, it can create ground for cooperation and understanding. However, favouring one's own group too much can undermine the trust in people and institutions outside this group.

The relationship between trust and cooperation is complex as the two concepts are closely related. Participation in associations and voluntary organisations, which could be described as behavioural manifestations of trust, requires a minimum level of trust for membership. Conversely, cooperation also nurtures and reinforces trust, creating a two-way relationship. It needs to be kept in mind, however, that voluntary associations where cooperation is taking place do not always play a big role in people's lives. When examining vertical cooperation with the state, scholars emphasise a two-way relationship, noting that states that provide public goods increase societal trust, which in turn influences government efficiency and state–citizen cooperation (Leininger et al., 2021).

3.3 Climate resilience

Disasters are not entirely natural, as is often presumed, but rather the outcome of human factors that could be social, political, economic, etc. (McLeman & Gemenne, 2018). When observing comparable hazards at different times or places, the outcomes will change depending on the vulnerability of the affected population (Beine & Jeusette, 2021). Building on this, the concept of resilience has emerged as a core objective in climate change studies worldwide. It describes the capacities to prepare, react, respond and manage climate-related stresses (Sono, Wei & Jin, 2021), describing how far a system can cope with climatic stress and whether it escalates into a disaster. In this regard, resilience takes on a multifaceted nature, encompassing not only the ability to withstand and recover from environmental shocks but also taking into consideration the broader socio-economic factors that contribute to vulnerability (Kirbyshire et al., 2017). The following briefly describes how climate resilience ties into social cohesion as well as the conception and application of resilience within the presented research context.

3.3.1 Interdependence of climate resilience and social cohesion

In the face of environmental stress, the interplay of climate resilience and social cohesion is becoming increasingly relevant in fostering long-term stability, particularly considering the heightened vulnerability of displaced populations (Patel & Gleason, 2017). Oftentimes forced to settle in informal communities, these populations encounter additional risks arising from factors such as hazardous geography and isolation from public services, emphasising the critical role of resilience for these communities (Patel & Gleason, 2017). Such climate-induced stressors

put individual livelihoods and economic stability at risk, potentially causing conflicts within these communities that frequently rely on community-driven processes (Ulrichs, 2019). Cohesive communities generally seem to be better equipped to navigate and recover from environmental challenges (Bergstrand & Mayer, 2020). Confirming this, research on how climate resilience intersects with social cohesion indicates a consistent significant positive correlation, although the strength of the relationship varies (Townshend et al., 2015).

Effective climate resilience strategies extend beyond physical infrastructure; they must also consider social dynamics, equity and community participation to foster social cohesion (Beierl, 2021). Policies and programmes aimed at enhancing resilience may be ineffective if they neglect local social cohesion, as cohesion itself is a key driver of resilience (Townshend et al., 2015). Community-based support services, rather than external interventions, have proven more effective in strengthening localised resilience (Vertigans & Gibson, 2019).

In urban contexts, community-driven processes and social cohesion play a particularly critical role in building resilience, especially when communities lack access to government resources (Patel & Gleason, 2017). Therefore, integrating both climate resilience and social cohesion into humanitarian interventions and urban planning offers a more comprehensive approach to addressing both immediate and long-term challenges faced by displaced persons in urban areas. This perspective is essential for developing tailored policies and strategies that not only mitigate environmental risks but also reinforce the social fabric of displaced communities.

3.3.2 Conception and operationalisation of climate resilience: the three As

Climate resilience is defined as the capacity to anticipate, avoid, plan for, cope with, recover from, and adapt to climate-related shocks and stresses (Bahadur, 2015). This conceptualisation suggests that social systems possess adaptive, anticipatory and absorptive capacities that enhance their ability to function well and withstand shocks, contributing to overall well-being and human development in the face of climate extremes and disasters (Bahadur, 2015). These three interrelated concepts of climate resilience are known as the “Three As”:

Adaptive capacity refers to a society’s ability to navigate and adjust to long-term climate challenges and recover effectively after a disaster. It involves making intentional decisions, learning from past disturbances, and constructing resilience to avoid falling into recurring vulnerability cycles. This capacity is particularly evident during non-emergencies, emphasising an increased awareness of changing conditions and the adoption of innovative strategies. The measurement of adaptive capacity encompasses various factors, such as tracking changes in collective or individual assets and incomes, observing shifts in the structure and nature of livelihoods (income diversification/stability), evaluating the utilisation of climate information and climate-smart approaches, and assessing access to basic services. When it comes to individual livelihoods, flexibility is also recognised as a core element, including the ability to substitute one livelihood for another, based on contextual needs.

Anticipatory capacity focuses on the pro-active ability of communities to anticipate and mitigate the impact of climate variability and extremes through preparedness and planning. It involves the foresight to identify and understand potential threats, enabling timely responses and adaptive strategies. In contrast to adaptive capacity, it is useful in the medium to short term. Anticipatory capacity is displayed when communities can forecast specific shocks, such as through early warning systems, and engage in vital planning activities to manage disaster risks. Its primary focus lies in mitigating mortality rates and minimising the adverse social, economic and physical impacts arising from climate extremes and disasters. While actions to enhance anticipatory capacity typically centre on specific hazards, certain interventions may also serve dual purposes, for instance, social protection measures. Other measurement criteria include: changes in preparedness and planning, capacities and coordination, and risk information.

Absorptive capacity deals with a society's ability to absorb and cope with the immediate impacts of climate variability. This capacity is exercised during and after a disturbance and is concerned with "functional persistence" – the ability to buffer and endure the short-term impacts of climate extremes. Measuring absorptive capacity involves assessing the community's ability to access and deploy both tangible assets (e.g., savings) and intangible assets (e.g., social networks) to survive intensive shocks and maintain well-being. While anticipatory capacity is crucial prior to a climatic event, absorptive capacity is employed both during and after a disturbance, aiming to mitigate the immediate impact on people's livelihoods and basic needs.

Scholarship on climate change adaptation and disaster risk reduction have additionally been able to identify key characteristics of resilient communities, since knowledge, health, organisation, connectivity, infrastructure, economic opportunities and natural asset management, which can be structured as subcategories within this concept to outline individual resilience capacities (Patel & Gleason, 2017).

However, while the pursuit of resilience-building is crucial, it also introduces potential challenges related to community cohesion. One notable concern revolves around the intricate task of managing trade-offs, where certain resilience-enhancing measures might inadvertently amplify the vulnerability of other individuals or groups (Bahadur, 2015). Therefore, a careful approach is required to explore whether resilience-building efforts contribute positively to both the collective and individual well-being within communities.

Building upon these considerations, existing literature further underlines the perception of residents in informal settlements as politically voiceless, lacking comprehensive knowledge of their vulnerability dynamics, thereby potentially undermining their efforts in flood management (Amoako, 2017). Acknowledging this potential controversy, the above-described characteristics are considered guidelines for this paper, maintaining an open-minded approach with the necessary flexibility to adjust to unforeseen factors and where the study's participants can speak for themselves.

4 Research design and methodology

To understand characteristics of social cohesion in the selected field sites – Agbogbloshie, Old Fadama and Glefe – this research addresses the following key questions:

a) How does trust, inclusive identity and cooperation for the common good, within the community and across institutions, manifest in Accra's informal settlements

b) *Sub-question:* What role do climate resilience efforts play in fostering or hampering vertical and horizontal social cohesion in Accra's informal settlements

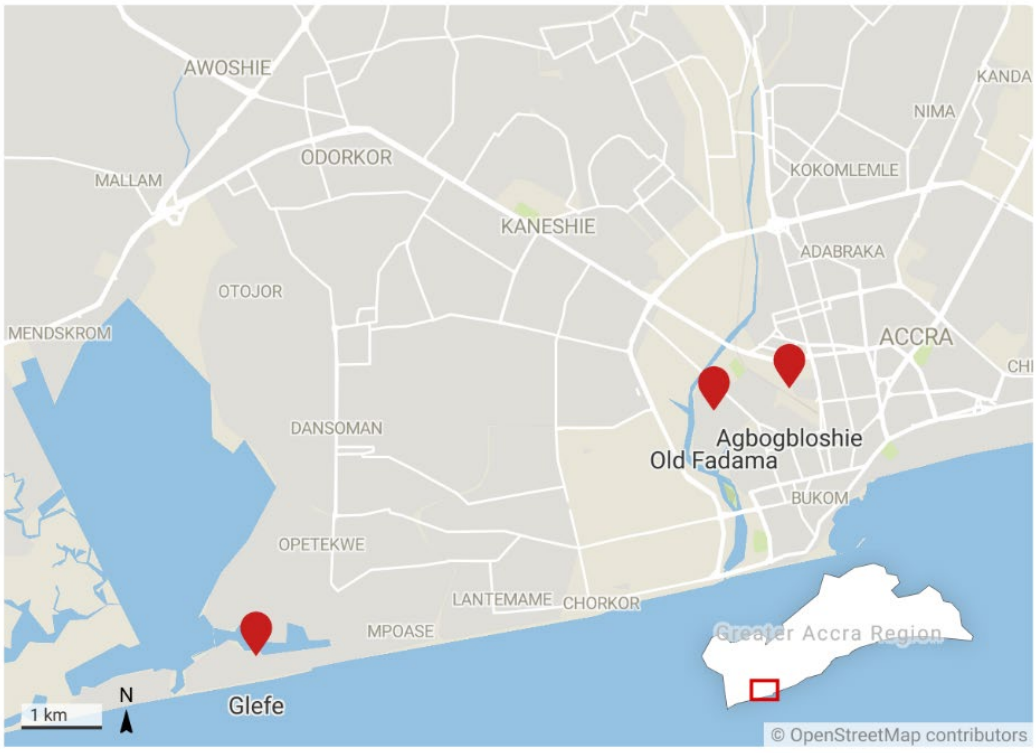
4.1 Case selection and research sites

The study sites for this research comprise three purposefully selected settlements: Old Fadama, Agbogbloshie and Glefe. These communities are considered informal due to several factors: they have experienced little to no urban planning, and land ownership is often contested, leading to frequent threats of eviction. Additionally, their locations make them particularly vulnerable to environmental events such as flooding and coastal erosion, exacerbating the precariousness of living conditions in these areas. Residents in these communities have also experienced various forms of displacement, from temporary to permanent, as a result of flooding, coastal erosion and sea level rise.

Two considerations guide our selection of informal settlements for this study. Firstly, due to the difficulty in identifying displaced persons in urban settings we rely on historical knowledge of where people who have fled adverse environmental conditions in other parts of the country, or been re-settled by the government, settle when they get to Accra. These groups of people are attracted to the informal economy of the informal settlements in Accra, such as Old Fadama. The second consideration is that the three selected settlements are one of the most vulnerable due to environmental degradation, weakened infrastructure that makes them prone to being impacted by floods, sea-level rise and coastal erosion. These events often lead to temporary and permanent forms of displacement.

In this paper, the goal is not to inferentially compare the sites but to present them as related cases that best fit the subject of our inquiry. The selection of these sites highlights the challenges faced by residents in informal settlements and underscores the urgent need for local and global actors to address issues of urban planning and environmental resilience. Below, we describe socio-economic, political and biophysical characteristics of the communities.

Figure 2: Location of Old Fadama, Agbogbloshie and Glefe



Source: Authors, created with Datawrapper.

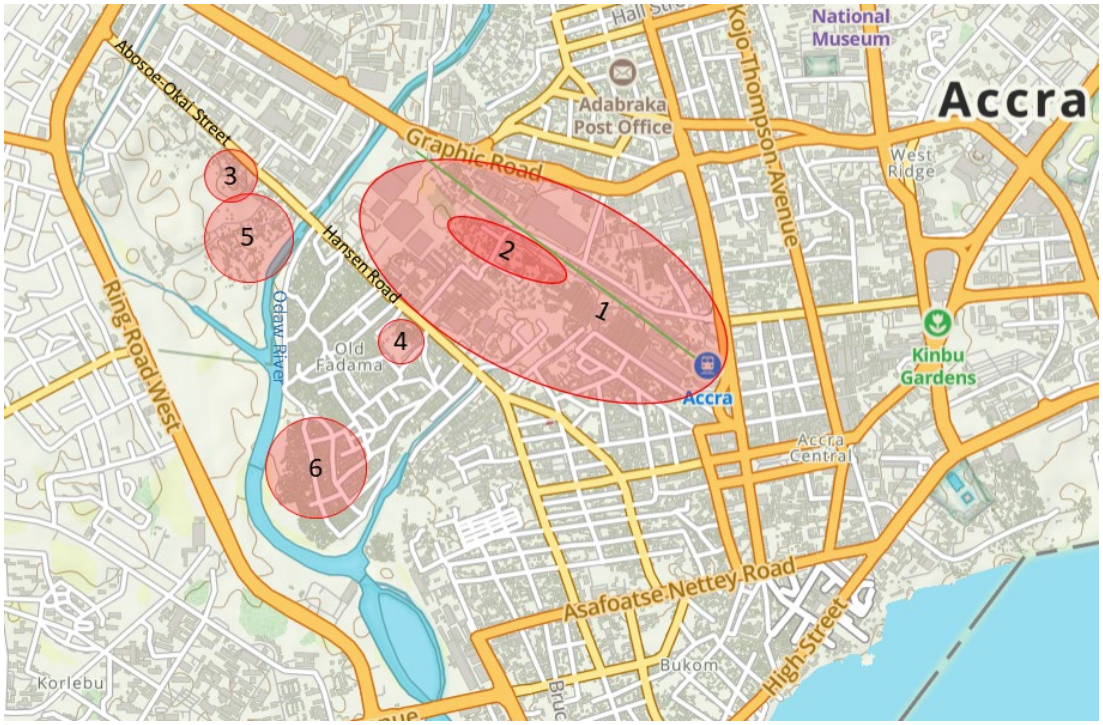
4.1.1 Agbogbloshie

The informal settlement of Agbogbloshie is surrounded by several settlements, namely Kaneshie, South Industrial Area, Abosoe Okai, Kokomlele, Ussher Town and Korle Bu, and consists of various “residences, warehouses, company manufacturing sites, marketplace places, automobile repair shops, carpentry shops and a hospital” (Dodd et al., 2023, p. 4516). In literature on and maps of the area, there are a couple of different locations labelled “Agbogbloshie”, or the name is mixed up with that of Old Fadama, with the names of both informal settlements sometimes being used interchangeably (Afenah, 2010; Amoako, 2017;

Amaoko & Inkoom, 2018; Dodd et al., 2023; Grant, 2006). The various Agbogbloshie locations mentioned throughout academic sources are as follows (compare with Figure 3):

1. Agbogbloshie residential area; informal settlement in this report (right-hand side of Hansen Road, south of Graphic Road)
2. Agbogbloshie Market (along the rail track near Agbogbloshie Road; part of Agbogbloshie residential area)
3. Agbogbloshie Onion Market (near old Agbogbloshie Scrap Yard)
4. Agbogbloshie Yam Market (located in the eastern part of Old Fadama)
5. Old Agbogbloshie Scrap Yard (closed digital dumping ground; left-hand side of Abosoe-Okai Street, north of the Odaw River)
6. “Agbogbloshie” garbage dump with new e-waste scrap yard (located in the western part of Old Fadama)

Figure 3: Location of Agbogbloshie in Accra



Source: OpenStreetMap 2024; own editing

Our research focused on the first Agbogbloshie residential area in the list, and on the Agbogbloshie Market area contained within it.

In Agbogbloshie, the spatial conflict between customary land ownership and formal urban planning has existed since colonial administration. The resulting informal growth increased the settlement’s vulnerability to flooding (Amaoko & Inkoom, 2018). Agbogbloshie has experienced repeated flooding events over the past two decades (Amoako, 2016), and inhabitants have resisted dangerous floods and coped with challenging environmental health conditions (Amoako, 2017). These flood-affected households continue to survive, with growing housing and population densities facing these regular floods, showing “gradual and evolving adaptive capacities and social resilience to flood hazards among poor urban dwellers” (Amoako, 2017, p. 1).

While Agbogbloshie scrap yards are labelled the “world’s largest e-waste dumping ground” (Population Connection, 2021) or “the second-largest site for processing such e-waste in all of West Africa [being] among top 10 most polluted sites worldwide” (Just2CE, 2020), and the area of Agbogbloshie is often cited as having a population of 40,000 (or 6,000 families), our data collection site, Agbogbloshie (residential area), is home to about 10,000 people (Field observation, 13 February, 2024). Major economic activities in Agbogbloshie include various petty trading, market or shop selling, and head porting.

Community leaders, including a traditional leader and community assembly members, play essential political roles in Agbogbloshie. The respective Assembly Man for Agbogbloshie market and residential area is accompanied by Unit Committee Members. One chief is responsible for Agbogbloshie market and residential area. Additionally, NGOs support juridical and administrative matters towards the Accra Metropolitan Authority (AMA) (Amoako, 2017; Field observation, 25 March 2024).

4.1.2 Old Fadama

Located in the northwest of Accra’s Central Business District (CBD), just across the Hansen Road from Agbogbloshie (residential area), lies Old Fadama (Housing the Masses, 2009; Adams & Nyantakyi-Frimpong, 2021). At more than 31 hectares, the area is considered the largest informal settlement within the bounds of Accra (Adams & Nyantakyi-Frimpong, 2021; Housing the Masses, 2009; Stacey & Lund, 2016). Moreover, it is one of the most densely populated sections with – according to an enumeration from 2009 – 2.5 persons per hectare (Housing the Masses, 2009).

Approximate boundaries of the community can be seen in the Odaw River, the Agbogbloshie Drain and Hansen Road (Adams & Nyantakyi-Frimpong, 2021; Housing the Masses, 2009). Large parts of the area have been reclaimed from the Odaw River and Korle Lagoon by filling waterlogged areas with sawdust from a nearby timber market (Housing the Masses, 2009). The community has evolved into a densely populated area characterised by self-constructed shacks and kiosks but lacking infrastructure (Amoako & Inkoom, 2018).

While some authors contend that the settlement in what is today known as Old Fadama can be traced back to the late nineteenth century, when migrant groups established peri-urban villages in the region (Stacey & Lund, 2016), the predominant narrative of the informal settlement’s history starts in the 1960s. Following Ghana’s independence in 1957, the new government sought to implement the so-called Korle Lagoon Ecological Restoration Project (KLERP), which aimed to restore the lagoon’s natural ecology, enhancing its hydrological efficiency to improve water flow, and transforming it into a major tourist attraction (Amoako, 2016). However, the KLERP initiative was abandoned after the government was overthrown in 1966 (Amoako, 2016; Amoako & Inkoom, 2018).

According to Amoako and Inkoom (2018 p. 2917), “the inability of successive governments to complete [the KLERP] or find appropriate use for the compulsorily acquired land around the lagoon gave birth to the Old Fadama community”. The unused land was first re-settled in 1981 by rural–urban migrants, primarily from Northern Ghana (Amoako, 2016). According to officials at the AMA, these early settlers were overlooked by city authorities, who considered the settlements temporary and expected them to disappear due to the lack of basic infrastructure and services (Amoako, 2016). This official neglect allowed the informal settlement to continuously grow (Amoako, 2016).

In the 1990s, Old Fadama experienced significant growth. In 1991, the AMA itself relocated many street vendors and petty traders from the city centre to Old Fadama, in an effort to “de-congest” and prepare Accra for the Non-Aligned Movement Conference (Amoako, 2016;

Amoako & Inkoom, 2018; COHRE, 2024; Farouk & Owusu, 2012). Vendors began constructing wooden kiosks and shacks, which eventually developed into residential units (Amoako, 2016).

In 1995, the informal settlement of Old Fadama experienced another substantial population increase when the Interior Ministry of Ghana relocated migrants displaced by the Konkonmba-Nanumba-Dagomba ethnic conflict (also known as “Guinea Fowl” war) in Northern Ghana to the area (Adams & Nyantakyi-Frimpong, 2021; Amoako, 2016; Amoako & Inkoom, 2018; COHRE, 2024; Farouk & Owusu, 2012; Stacey & Lund, 2016).

Reliable data on the demographics of Old Fadama are scarce. With no representative surveys conducted in recent years, the latest data stems from the previously mentioned community-led enumeration carried out in 2009. According to the latter, the total population of Old Fadama amounts to 79,684 individuals, 50.01% of whom identify themselves as male and 49.99% as female. The community is composed of people from all ten regions of Ghana. In total, 77% of the community’s residents originate from the three Northern Regions, and 11% from the Volta Region and 5% from the Eastern Region. Whilst, in terms of tribal affiliation, nearly half of the residents of Old Fadama are Dagomba, Akans represent the second largest group (15%), followed by Kokombas, Ewes, Baasares and Mamprusis. (Housing the Masses, 2009). The majority of new residents migrated to Old Fadama for economic reasons, in search of job opportunities. This group includes a significant number of female workers employed as head-porters *(kayayei)* (Farouk & Owusu, 2012). Old Fadama is still considered public property, resulting in residents not holding land titles (Adams & Nyantakyi-Frimpong, 2021; Amoako & Inkoom, 2018).

As with Agbogbloshie, the informal settlement of Old Fadama is located in an area which the AMA officially declared a flood prone zone (Amoako, 2017). Accordingly, the informal settlement has experienced annual flood events since mid-1986 (Amoako & Inkoom, 2018). However, according to Amoako and Inkoom (2018), the flooding incidents have increased over the last two decades. Due to a lack of official data on rain patterns and floods resulting from an absence of weather stations in the community, this finding is based on accounts from residents (Amoako & Inkoom, 2018). The flooding events usually occur during the rainy season. The particular vulnerability of Old Fadama to those events is caused by a multitude of factors, including the settlement’s proximity to the Odaw River and Korle Lagoon as well as the rapid and hazardous physical development of Old Fadama on waterlogged areas.

4.1.3 Glefe

Located along the Gulf of Guinea on the west coast of Accra, Glefe is a coastal community situated on a sandbar approximately two kilometres in length, and covers 40 hectares of customary land (Amoako & Inkoom, 2018). While there is more data and background on our other study sites, Glefe is interesting as both a case that expands the discussion on displacement to Accra, and adds an ocean-front case to our research. Glefe is nestled between two lagoons, locally referred to as Gbugbe/Gbegbu and Gyatakpo, and the sea, forming a low-lying terrain, which also serves to demarcate the Densu wetland (Angnuureng et al., 2023). These lagoons serve as natural boundaries and separate Glefe from Mpoase in the north (Abeka et al., 2020). The proximity to Dansoman, a larger community further north, also plays an important role for the community. To the east of Glefe lies Gbegbeyise, while Panbros (also: Pambros) is situated to the west. Panbros holds additional significance as it hosts Panbros Salt Production Limited (PSPL), West Africa’s largest salt producer, and its manufacturing facilities (Abeka et al., 2020). As accounts differ on maps and in literature, it is difficult to consign the precise borders of Glefe and its neighbouring communities, especially on the eastern borders, as the two communities seamlessly blend into one another.

Glefe’s coastal topography, characterised by open, low-lying coastlines, facilitates the unhindered influx of swell waves, leading to erosive longshore currents, and is therefore affected

by high levels of coastal erosion (Amoani, Appeaning-Addo & Laryea, 2012). Coastal protection in the form of a sea-defence wall was implemented in 2019 (Angnuureng et al., 2023). However, the wall was never completed and a stretch of Glefe's eastern beach remains in a constant state of erosion. Because of this, Glefe's location is highly vulnerable, with significant recession observed.

The settlement grew in the 1960s as a small peri-urban fishing community, evolving informally under customary land systems (Amoako, 2016). The first census to have noted the community was that of 1984, during which the population of Glefe was recorded as 978 (Amoako, 2016). However, these dates and numbers are contested within the community, indicating that the evolution of the community as a cluster of fishing households dates back to the period immediately after Ghana's independence in 1957; meaning that their population would have been far more than that by 1984 (Amoako, 2016). As with Agbogbloshie and Old Fadama, the disputed population figures and historical development narratives of Glefe arise from the local socio-political context and conflicts between traditional land claims and the state's formal urban planning system (Amoako, 2016; Amoako & Inkoom, 2018).

According to the 2010 population and housing census of Ghana, Glefe had a population of 8,738 people, spread across 2,368 households and 1,074 houses (Ghana Statistical Service, 2014). This population is marked by considerable ethnic diversity, including Ewes, Adas, Akans, Ga Dangmes, and other ethnic groups from northern Ghana (Amoako & Inkoom, 2018). Glefe's demographic composition features a wide heterogeneity of Ghanaians as well as migrants coming to live in Accra (Amoani, Appeaning-Addo & Laryea, 2012).

From the mid-1980s to the early 1990s, Glefe underwent rapid informal urbanisation without state intervention. Community leaders attribute this growth to factors such as rural–urban migration, a booming sandmining industry, affordable housing for low-income households, and changing livelihood patterns from fishing (Amoako, 2016). During this period, housing structures transitioned from thatch to wooden and concrete, reflecting socio-economic changes. The demand for residential land resulted in construction along the beach, exacerbating coastal erosion and flooding due to indiscriminate building in flood-prone areas and extensive sandmining (Amoako, 2016).

Glefe has evolved significantly from its development as a fishing community over the years. The presence of PSPL on Glefe's western periphery since the early 1990s has further complicated the community's flood risks (Amoani, Appeaning-Addo & Laryea, 2012). PSPL's salt extraction activities altered the natural flow of the Sakumo Lagoon in 1992, increasing the community's vulnerability to floods (Amoani, Appeaning-Addo & Laryea, 2012). While fishing remains a visible activity, with boats dotting the sea, its prominence seems to have diminished somewhat in recent times (Amoako, 2016). A superficial glance reveals the presence of local shops, street vendors, food vendors, and the occasional beach bar within the community, carefully indicating an economic diversification beyond its traditional fishing roots (Field observation, 13 February 2024).

Land transactions in Glefe have primarily been conducted by traditional authorities and private owners through informal agreements, often without the approval of city authorities or adherence to formal land-use planning systems. This lack of official oversight has led to the community's expansion into wetlands, areas unsuitable for habitation, further increasing its vulnerability to flooding (Abeka et al., 2020). Glefe faces significant environmental challenges due to its geographical location and lack of infrastructure. Located on a sandbar between a lagoon and the Atlantic Ocean, this situation poses a grave risk of flooding for its residents. When it rains, the community is submerged in spillover and backwash from the lagoon and ocean respectively. As a result, Glefe has gradually emerged into one of the most flood-vulnerable informal communities in Accra (Amoani, Appeaning-Addo & Laryea, 2012).

The first devastating flood event in the area was officially recorded in 1995, with severe floods occurring almost annually since, particularly in 1999, 2002, 2009, 2011 and 2018 (Amoako, 2016; McTavish, 2023). Additionally, almost every year, the Weija Dam, built on the Densu River, is spilt during the rainy season. Glefe and other downstream communities are inundated as a result (Tasantab et al., 2020).

Coastal erosion poses another significant threat to Glefe, as the community's shoreline has been experiencing relatively severe erosion. The shoreline change rate determined for Glefe between 2005 and 2011 was 1.2 m/a ± 1.3 m/a, indicating a relatively high rate of erosion (Amoani, Appeaning-Addo & Laryea, 2012) which is unlikely to have declined over the past years. The sea-defence wall was (partly) erected as a major governmental intervention and protection measure against this erosion (Sarfo, Bortey & Kumara, 2019).

4.2 Methodology

This chapter outlines the methodology employed in our research to explore the relationship between resilience and social cohesion. We use qualitative methods to gather in-depth insights. Specifically, we conducted focus group discussions (FGDs) to capture diverse viewpoints and foster interactive dialogue among community members. These varied approaches were used to allow us to gain a comprehensive understanding of the complex dynamics within the communities studied. We followed up with individual interviews in each of the communities to provide an added layer of key informant knowledge.

4.2.1 Data collection

Our local partner, the NGO Peoples' Dialogue (PD), facilitated access to the community leaders and focus group participants. The NGO was founded in 2003 and focuses on organising collaboration between organised communities in informal settlements and local governments in Accra. It is affiliated with the global network Slum Dwellers International, which strives for inclusive and resilient cities. The core of the PDs work in Accra includes fostering self-organisation among groups and communities and community-driven development. PD has extensive experience in working with international organisations and partners (Afenah, 2009). The three settlements selected for the study have a longstanding history of working with the PD and have a certain level of trust with the NGO to facilitate conversations with researchers and other actors. Gaining access through PD as a gatekeeper was a necessary step to build trust with the communities in order to conduct the research. While there are positive aspects of gaining entry to the field through gatekeepers, there are also limitations. One such is selection bias whereby some people are excluded from the selection process for reasons such as lacking social or economic power (Bell-Martin & Martson, 2021). Attempts to mitigate this was done by providing PD with a guideline for selecting participants, in particular with specified criteria such as experience or knowledge of climate-induced displacement and gender representation.

We chose to conduct focus group discussions because of its usefulness in providing a space for discussing shared experiences and understandings of social issues. Social cohesion and resilience are concepts that describe not just individual experiences but collective experiences. In a group setting, the researcher simulates a normal, almost everyday, discussion. Through this, arguments, memories and diverging experiences and views can come up (Flick, 2021; Vogl, 2022). Consequently, through the interaction, the participants can share different perceptions and their underlying norms, beliefs and values (Parker & Tritter, 2006). With the help of FGDs, the researcher can gain in-depth-knowledge and understanding of some of the social issues that the participants experience (Nyumba et al., 2018). Participants of the focus group can be homogenous in the sense that they share some socio-demographic characteristics or commonalities relevant to the research topic (Parker & Tritter, 2006; Tausch & Menold, 2016).

However, FGDs also have important drawbacks. The drawbacks include the dominance effect, meaning that certain people will dominate the discussion in talking much more than other participants. Furthermore, while the group should be kept as homogenous as possible, the perceived status of a participant can affect the discussion (halo effect). Additionally, diverging opinions could be voiced less in order not to compromise the group cohesion, resulting in groupthink (Nyumba et al., 2018).

The research team conducted six focus group discussions with ten participants on average, two in each community (one all-male and the other all-female). One IDOS research fellow and one Centre for Migration Studies (CMS) student attended the discussions and shared the roles of moderator and observer. Focus group discussion participants were selected from the communities with the help of PD. In some communities, PD provided interpreters who were also community members or key informants. In Old Fadama, the discussions took place in the chief palace (male) and in a day care centre (female). Both discussions were conducted in Twi, with some translations into English. In Agbogbloshie, the discussions took place on the grounds of a church (male and female). The female focus group was conducted in Twi while the male focus group was held in English with some translations into Twi. In Glefe, the two discussions were conducted in English with translation into Twi and back again to English. They took place in a church in the centre of the community.

Participants in the female focus groups across the three communities were between the ages of 18 and 75. The age distribution of the men in all three communities was between 18 and 62. Participants were made up of traders, electricians, drivers, seamstresses etc. Most of the women were engaged in petty trading. In Old Fadama, the male focus group discussion was made up of the local chiefs representing the tribes in the community and an Imam, as was decided by the leaders of the community. The focus group participants were made up of Ga, Kokomba, Fanti, Bono, Busari, Akyem, Kwahi, Ashanti, Dogomba and Akan tribes.

An interview instrument was used in all six FGDs (attached in Annex). The instrument included questions in the following topic areas:

Table 1: Focus group instrument (19.03.2024)

Topic areas
• community and neighbourhood
• experiences with displacement
• resilience (adaptive capacity)
• resilience (absorptive capacity)
• resilience (anticipatory capacity)
• social cohesion ▪ inclusive identity ▪ trust (social/horizontal) ▪ conflicts ▪ trust (institutional/vertical) ▪ cooperation for the common good (intergroup/horizontal) ▪ cooperation for the common good (state-society/vertical)

Source: Authors

4.2.2 Data analysis

The data analysis was conducted through a qualitative content analysis framework guided by elements developed by Kuckartz and Rädiker (2022). This method facilitates a thorough exploration of both explicit and nuanced content within the collected data. A dual approach involving both inductive and deductive coding methodologies has been adopted to provide a detailed understanding of the respondents' perspectives. The analysis began with an inductive stance, to break down and uncover patterns from the raw data. This approach facilitates an exploration of the data without predefined categories, ensuring openness to unanticipated insights (Thomas, 2006). Simultaneously, a deductive coding strategy was employed, aligning with theoretical foundations and the structure outlined in the interview guidelines. While inductive coding captures the richness of emerging themes, deductive coding ensures a focused examination of predefined categories, fostering a balanced and rigorous analytical process (Azungah, 2018). The implementation of this dual coding approach was supported by the use of the data analysis software AtlasTi.

5 Findings and discussion

In this section, we present results from our analysis of the qualitative data obtained to answer these research questions: i) what characteristics define social cohesion and ii) the role of climate resilience in fostering and/or hampering social cohesion. We start by providing insights from the study on experiences of environmental/climate events that necessitate resilience and social cohesion in dealing with the events. The most prominent climate event in the areas we did research was flooding, and this was also what drove discussions with respondents we interviewed.

5.1 Experiences of climate/environmental events and displacement context

When asked about environmental events occurring in their community, residents of Glefe mentioned sea-level rise that resulted in coastal erosion, although there seemed to be some disagreement regarding the extent to which the community was affected by this (FGD Glefe women). In Old Fadama, on the other hand, a focus group participant cited the heat that prevails in Northern Ghana during the dry season and the resulting water shortage as a reason for moving to Accra (FGD Old Fadama women). However, the environmental event predominantly mentioned in all three communities was flooding. In Old Fadama and Agbogbloshie, flooding events were referred to as "the major problem we face in this community" (FGD Old Fadama women) and "the thing that bothers us the most" (FGD Agbogbloshie women) respectively.

With regard to the causes of flooding events, members from all three communities mentioned rain and the geographical location, namely the proximity of the three settlements to lagoons and wetlands (FGD Agbgbogbloshie men, Agbogbloshie women, Old Fadama women, Glefe women). Moreover, they identified poor urban planning as a key factor contributing to and exacerbating the effects of flooding. Climate change, by contrast, was seldom associated with flooding events. Only in one community did focus group participants refer to climate change as resulting in a change in rain patterns and an inability to predict flooding events:

> because of climate change, the weather has changed. Before, in March the rain would fall a little, April, it would rain more. June, July, it would rain. But now the rainy season has moved forward. Last year it rained September, October, November, even December, it was raining. This is because of climate change. (FGD Agbogbloshie women)

> At first you could predict that it would rain, (…) but because of climate change, now, if you say you're predicting something, it is negative. (FGD Agbogbloshie women)

The effects of flooding for the community members are multi-fold. With the water entering their homes, community members from all three informal settlements reported on the destruction of their personal belongings and livelihoods (FGD Agbogbloshie women, FGD Old Fadama women; FGD Glefe women). Moreover, given that the water often stagnates, the floods cause damage to properties. Accordingly, focus group participants related that "The water penetrates the walls of my room and leaks into the room. Usually, it takes more than a month for the water to dry up" (FGD Old Fadama women). In addition to the damage to the buildings, the stagnant water also poses health risks. In two of the three informal settlements studied, the community members furthermore gave accounts of deaths caused by the floods (FGD Old Fadama women; FGD Glefe women).

Whilst some community members remain in the flooded informal settlements due to a lack of alternatives (FGD Old Fadama women, FGD Glefe men; FGD Glefe women), others temporarily relocate to other places not affected by flooding, both within and outside the respective informal settlement, as reported in all six focus group discussions. Those displaced tend to stay with family members or friends for the duration of the flood (FGD Old Fadama women, FGD Glefe men, FGD Glefe women). This shows that people rely on social networks to enable them to cope with environmental events such as displacement (Hahn et al., 2008). For those staying in the informal settlements, the flooding further complicates their everyday life in that, for instance, according to a community member "[e]ven cooking food becomes difficult because the coal-pot becomes wet." (FGD Old Fadama women)

5.2 Resilience

When looking at resilience, it encompasses the ability to adapt to, withstand and recover from environmental shocks while also addressing broader socio-economic factors that contribute to vulnerability (Field et al., 2012; Joakim et al., 2021; Manyena et al., 2019). It is important to note that these resilience capacities are often influenced by various secondary factors, making them not entirely distinct from one another. As a result, we observe some overlap within the analysis. Furthermore, while participants in the FGDs had diverse experiences with environmental stressors, there was no recent event within the communities at the time of our research. This circumstance may be associated with the timing of our study, conducted at the end of the dry season in Accra. Consequently, the narratives shared by participants reflected a range of past experiences, differing in intensity and type of disaster, varying from one community to another and from person to person.

5.2.1 Adaptation strategies

One aspect of adaptive capacity is making deliberate choices to cope with shocks. The communities Glefe, Agbogbloshie and Old Fadama all employ a range of strategies to adapt to their circumstances, drawing on past experiences to employ both short-term and long-term coping mechanisms within their means. In the short term, many residents of the communities are aware of vulnerable spots in their homes where water might seep in and they take proactive steps to mitigate these risks (FGD Agbogbloshie women). Aside from regular community organised cleanup exercises "… to remove sand from the gutters so that it pave(s) the way for easy flow of water when it rains." (FGD Glefe women), residents also described taking immediate actions if necessary, such as desilting choked gutters during rain to prevent water accumulation (FGD Agbogbloshie women). This proactive undertaking extends to community support, where neighbours help those more negatively affected by floods (FGD Glefe women) and, in some cases, look after each other's properties to safeguard them from flooding (FGD

Old Fadama women). Several other studies show the role of collective efforts by members of communities to build resilience to climate change (Ayers & Forsyth, 2009; Schlingmann et al., 2021).

Long-term coping mechanisms involve more substantial changes. Some inhabitants buy cement and perform masonry work on their affected houses to enhance structural resilience (FGD Glefe women); others seek new accommodations with better drainage systems whenever feasible (FGD Agbogbloshie men). Some people view relocation as the best long-term strategy, though it is not always possible due to resource constraints (FGD Glefe men). Thus, inhabitants are kept in a state of forced immobility despite the known risks (FGD Glefe women; FGD Agbogbloshie men). In one of the FGDs it was stated "… they have no place to go and stay, so all they have to do is to stay there and bear all the consequences" (FGD Glefe men). These findings are in line with existing literature that shows that limited capacities keep people trapped in places of risk even though they are open to relocating as an adaptation strategy (Ayeb-Karlsson et al., 2022; Black et al., 2011; Ekoh et al., 2023).

Adaptive capacity also involves an increased awareness of changing conditions and the adoption of innovative strategies to mitigate potential risks (Bahadur, 2015). Our data indicate that heavy environmental events affecting these informal settlements are familiar to the inhabitants, with no drastic changes observed over the years. This familiarity suggests a level of experience and established responses, yet it also points to a potential stagnation in adaptive strategies, which may not be evolving as rapidly as needed to address emerging threats.

Social learning is another significant aspect of resilience building that involves members of a society collectively understanding challenges that affect them, with the goal of applying solutions/adjustments in order to cope with future shocks (Biesbroek & Wals, 2017; Fazey et al., 2007; Manyena et al., 2019). In our study, we find that social learning may be impacted due to the frequent turnover of inhabitants in these settlements, adding another layer of complexity to the adaptive capacity observed. These areas often serve as preliminary entry points to Accra, leading to a dynamic and continually changing population. Population turnover can disrupt the continuity of local knowledge and adaptive practices, making it challenging to maintain and build upon established strategies. As new residents arrive, they may bring different levels of experience and awareness, which can either enhance or hinder communities' overall resilience.

5.2.2 Anticipatory capacity

Anticipatory capacity mainly focuses on the proactive ability of communities to anticipate and mitigate the impact of climate variability and extremes through preparedness and planning (Bahadur, 2015). Effectively utilising climate information is a critical component of anticipatory capacity (Antwi-Agyei et al., 2021; Boyd & Cornforth, 2013; Boyd et al., 2015). Information dissemination often occurs through informal channels such as word-of-mouth, which, while beneficial, has limitations in accuracy, scope and potential actions. According to some residents, their experience-based knowledge is becoming less reliable because of climate change (FGD Agbogbloshie women). Nowadays, communities also rely on forecasts from radio and television channels (FGD Agbogbloshie women; FGD Glefe women; FGD Agbogbloshie men; FGD Old Fadama women), but these are not accessible to everyone, and not all residents receive the necessary information (FGD Glefe women). Thus, there seems to be a gap between the efficiency of these information channels and the community's capacity to act on this information.

On an individual level, while people seem to be aware of risks and their vulnerability, there are little means to proactively mitigate impacts of environmental challenges. Some residents even expressed a wish to help others, but not being able to because of their own financial situation: "I would wish to support my neighbour or others in this community when such occurrences happens, but I cannot because of limited funds. There is too much hardship" (FGD Glefe

women); “because of money issues, we could not save our families and they were all evicted and relocated (...)” (FGD Agbogbloshie women).

5.2.3 Absorptive capacity

Absorptive capacity deals with a society’s ability to absorb and cope with the immediate impacts of climate variability and extremes (Ulrichs et al., 2019). Measuring absorptive capacity involves assessing the community’s ability to access and deploy both tangible assets, like savings, and intangible assets, like social networks, to survive intensive shocks and maintain well-being (Agrawal et al., 2020; Hahn et al., 2008). However, many communities lack savings and people are forced to routinely rely on family units, neighbours, and friends for support: “We who live near the Glefe lagoon, whenever the officers of Weija dam [located at the Densu River at the Western outskirts of the Greater Accra Region] opens their dam, my house get flooded. I usually get displaced temporally to live at Shiabu [a community near Glefe] where my extended family members stays.” (FGD Glefe women)

There are some examples of families and neighbours pooling their resources to rent pumps to remove floodwaters (FGD Old Fadama women). Otherwise, the affected inhabitants have to rely on themselves: “I use saucepans and buckets to collect the rainwater leaking from the ceiling. When the rain stops, we pour the water outside and mop the room. That is what we do.” (FGD Old Fadama women). These intangible assets in the form of social networks serve as a lifeline for many people affected by the flooding. Nevertheless, the support is rarely sufficient and not an option for everyone: “… when you don’t get [support] then you move to your hometown” (FGD Glefe men).

5.3 Characteristics and perceptions of social cohesion

Social cohesion, as defined by Leininger et al. (2021), involves three pillars: inclusive identity, trust and cooperation for the common good. This section examines how these pillars manifest and what characteristics define social cohesion in the three communities.

5.3.1 Inclusive identity

While the respondents mainly stressed unity and an atmosphere of non-discrimination, several identity aspects still played a role in their responses. Some respondents discussed how the shared experiences of challenges, such as land rights issues and potential eviction, unite community members. These common struggles often bring residents together, fostering a collective identity: “We are one family here at Agbogbloshie. I don’t know what I will say because we are all one family” (FGD Agbogbloshie women). Especially noticeable were mentions of ethnic and cultural diversity, as it is a prominent characteristic of all three communities. Residents frequently mention the high level of diversity, with people from various nationalities and ethnic backgrounds coexisting peacefully. For instance, a resident of Old Fadama described: “This community is like a forest; the root of every tree can be found in this community. There are different groups of people, who speak different languages” (FGD Old Fadama women).

Historical conflicts might have shaped community dynamics but are not seen as current major issues. The conflict between the Konkomba and Dagomba in the North of Ghana, for example, led to many people migrating south and settling in Old Fadama. Yet the respondents mainly focus on peaceful coexistence today. Additionally, cultural events such as weddings and funerals bring people of different backgrounds together, reinforcing social cohesion through the celebration of diverse traditions:

> We have festival[s] that bring us together. Each group has their specific festival so the community get invited whenever a particular group is celebrating its festival. […] When someone is getting married, or there is an outdooring or funeral, we all get invited and attend in unison. (FGD Old Fadama men)

Language diversity presents both challenges and opportunities for social cohesion. Initially, language barriers can hinder communication, but residents' adaptability mitigates this issue. For Agbogbloshie, respondents described how newcomers often learn local languages like Twi and Ga, facilitating better integration and interaction. Religious diversity is present, with most respondents identifying as Christian or Muslim. However, religion is not mentioned as a source of conflict, indicating a level of religious tolerance and coexistence.

Gender dynamics can significantly influence perceptions of inclusive identity. Many respondents, predominantly women, shared that they do not feel discriminated against because of their gender. However, some gender-related challenges were directly mentioned, such as domestic violence and the difficulties faced by pregnant women during flooding. In Old Fadama and Agbogbloshie, many women are market sellers and therefore doing what are traditionally considered male jobs. One respondent noted that women have taken on these roles to protect their families from poverty.

The analysis of the focus group discussions from Old Fadama, Glefe and Agbogbloshie reveals that social cohesion in the communities seems to be underpinned by an inclusive identity that is shaped by shared experiences of poverty and marginalisation. Despite challenges, particularly those related to historical conflicts and structural challenges, the overall sentiment is one of peaceful coexistence, although in places like Agbogbloshie partisanship is starting to create tensions among people in the community.

5.3.2 Trust

When it comes to vertical trust, as previously defined, the presence and helpfulness of various institutions and authorities was perceived in different ways regarding both the context and the respective informal settlement. Throughout the three case sites, community members talked about trust in institutions if they could visibly see or benefit from the activities of the institution (e.g., construction, campaigns). In Agbogbloshie, for example, trust in national and municipal governments was not only low (FGD Agbogbloshie women), but also hope in politicians was generally lost (FGD Agbogbloshie women). The government was even seen as unconstructive: regional "politics is what hinders us from moving forward here" (FGD Agbogbloshie women). However, in Agbogbloshie and Glefe, positive sentiments were expressed regarding the assemblyman – the community representative in the municipal governance structure. This is because assemblymen take a prominent role in conflict resolution within the community. In cases where they fail, the chief is appealed to (Field observation, 25 March, 2024). For Old Fadama, where several chiefs lead the community, the chiefs are typically the first point of call (FGD Old Fadama men). Traditional authorities like the chiefs play a critical role in mediating conflicts, yet not all community issues are within the chiefs' capacities to resolve. In such cases, community members from all three data collection sites mentioned that the community police are trusted to address such conflict situations (FGD Agbogbloshie women; FGD Old Fadama men; FGD Glefe women).

In Old Fadama and Agbogbloshie, attempts by regional/municipal governments to evict people have affected the level of trust to a large extent (FGD Old Fadama women, FGD Agbogbloshie women). NGOs support the communities through campaigns and provision of legal advice to resist official evictions plans. Yet, NGOs can typically work through the confirmation of community leaders only after "grassroots" community members have petitioned for their support (FGD Old Fadama women). Women in Old Fadama welcomed the help of NGOs specifically regarding income diversification, which gives them more independence:

> Also, life was very hard in the past, but the NGO [...] helped us to overcome a lot of the challenges and gave us freedom. Currently, the women in this community can sell and engage in any economic activity of their choice without gender discrimination. The assistance we receive from the NGO has improved our well-being. (FGD Old Fadama women)

Additionally, NGOs helped in times of crises such as fire outbreaks or flooding and created a kind of social safety network which governments were not assisting with (FGD Old Fadama women): “We save our money with the association [NGO], so they give us loans to safeguard our livelihoods in times of crisis” (FGD Old Fadama women). However, not all NGOs were trusted, because cases occurred in which NGOs misused the collected funds of community members (FGD Old Fadama women).

Trust in media bodies was low, although the presence of various media was frequent but their content was generally perceived by community members as a false representation of the community (FGD Agbogbloshie women; FGD Old Fadama men).

At the same time, horizontal (generalised) trust was on the decline in terms of the ability of thematic community associations like climate change clubs or community-led associations to collect funds for difficult economic times in Agbogbloshie (FGD Agbogbloshie men) or Glefe (FGD Glefe men). Respondents described both a misuse of state aid or collected community funds among various clubs.

All three communities highlighted a relatively low perception of vertical trust, especially regarding municipal or governmental activities and offices. There was in part (Glefe and Agbogbloshie) also a change in horizontal trust, mainly due to shifts in partisanship of community assemblies/assemblymen, mitigated through neighbourly help and on clubs and societies. For members of all three sites, community assemblymen and the chiefs were the preferred and relatively accessible bodies in terms of conflict resolution, followed by police stations within the communities. Traditional authorities (chieftaincy) cooperated closely with assemblymen.

5.3.3 Cooperation for the common good

In all three communities, cooperation for the common good predominantly occurs on a horizontal level through associations and clubs. These groups provide support for social events like weddings and funerals and offer help during times of illness or bereavement. Women in Agbogbloshie, in particular, described the close relationships they had with community associations, which play a pivotal role in fostering cooperation and strengthening social cohesion. An example of such cooperation is the climate change club in Agbogbloshie, which used to clean gutters regularly. However, this initiative fell apart due to a lack of funds and cohesion among members. Similarly, men in Old Fadama reported that some clubs lost trust because they mismanaged funds provided by members. In Glefe, a fairly large club helps with social events, but financial constraints prevent some residents from participating.

Women’s involvement in religious community associations, especially in Agbogbloshie, is noteworthy. These associations provide a support network, addressing communal challenges collaboratively and reinforcing trust and solidarity. While many associations are religious and primarily involve members of a specific faith, respondents emphasised that cooperation often extends beyond religious, ethnic and national boundaries. One respondent highlighted this inclusivity: “We have lived with them for a very long time. It is not today that we started. We, the Ga’s here, see that the others are helpful. We are happy with that; that is why we do not hesitate to help them as well.” (FGD Agbogbloshie women)

Despite frequent mentions of unity and cooperation within the communities, there is a notable lack of collective action related to environmental events. This gap indicates that while horizontal social cohesion is strong, it does not consistently translate into cooperative behaviours aimed at addressing environmental challenges. This is potentially tied to the limited availability of capacities and resources. Members of the communities often rely on each other for temporary support, such as providing shelter after displacement or helping to extract water from flooded homes. However, this does not consistently translate into long-term cooperative behaviours aimed at addressing environmental challenges.

NGOs play a critical role in facilitating cooperation for the common good. Respondents frequently mentioned NGOs as catalysts for bringing community members together and providing essential support. In Agbogbloshie, for instance, residents faced the threat of eviction but, with the help of NGOs, they were able to secure legal representation, engage with political institutions, and develop arguments against the evictions by conducting a census (FGD Agbogbloshie women). PD was frequently mentioned as a key NGO in these efforts (FGD Old Fadama women). It was mentioned how the organisation not only provided practical assistance but also served as an important connector and advocate for the communities.[1]

Vertical cooperation between community members and political institutions is sporadic and often ineffective. Town hall meetings, such as those organised by the AMA, provide a platform for community members to engage with political representatives. During these meetings, topics like budget allocations and sustainability initiatives are discussed. However, not all community members can attend these meetings, and participation is often limited to selected community leaders. This selective participation can lead to suspicions of partisanship and distrust between community-members aligned with different political parties. As one respondent noted, “most of the meetings are held by the political parties, so when one is calling for a meeting other members of the other party will not join.” (FGD Glefe men)

The low level of trust in political institutions hampers vertical cooperation. Many respondents expressed scepticism about the assistance provided by political institutions during crises such as flooding. This distrust leads residents to rely more on individual efforts rather than collective action facilitated by vertical cooperation.

5.4 Connections between social cohesion and resilience

In this section, we present our findings on the connection between climate resilience and social cohesion in the communities of Old Fadama, Glefe and Agbogbloshie. Our research indicates a bidirectional relationship between these two factors. At the horizontal level, social cohesion has a more prominent impact on climate resilience. We assume that the influence of climate resilience efforts on social cohesion is less pronounced because most resilience initiatives by the community to support each other are short-term, making their impact on social cohesion less obvious. Further quantitative research could help evaluate this assumption. At the vertical level, we find that limited resilience-building efforts negatively affect social cohesion between the community and state institutions. Similarly, low vertical social cohesion also hinders resilience efforts within the communities.

1 It is important to contextualise this. PD was the organisation that recruited the focus group participants and was present during most of them

5.4.1 Horizontal social cohesion and short-term resilience efforts

Social cohesion is evident in the high levels of trust and cooperation among community members. Cooperation towards building resilience to cope with the impacts of environmental events tends to be short-term, however. Long-term collective action in the communities is inhibited by limited communal resources, prompting residents to rely on their family and personal resources rather than engaging in collective community action. At the same time, respondents frequently mentioned mutual support within their communities, particularly through informal networks and community associations. These associations primarily focus on social events and immediate personal needs, such as weddings, funerals and providing assistance during illness or bereavement. While community associations foster a sense of belonging and support among residents, their focus remains largely on social and cultural activities rather than on proactive environmental resilience. This limitation indicates that while there is a foundation for potential collective action, it is not being harnessed effectively to address environmental challenges. Cooperation for the common good exists, but it is not sufficiently directed towards long-term resilience-building activities. Research shows that collective action towards building long-term resilience could include networks and groups geared towards preparedness, knowledge sharing and social learning, and savings to support immediate response efforts (Goldstein, 2008; Maclean et al., 2014; Panman et al., 2022).

The data gathered from our study underscores the self-reliance within these communities, as individuals do what they can to navigate their way through challenging circumstances, such as coping with floodwaters. This highlights the vicious cycle of poverty and vulnerability these communities face, often resulting in forced immobility and limited overall resilience. The social networks within these communities play an important role in short-term coping mechanisms following floods. For example, a participant stated “[on] the positive side sometimes, you see when it rains heavy you will see people rush to the low part to help those who are affected. We approach them and help them collect the water from their places. He is my friend so I have to help him.” (FGD Agbogbloshie men) These social networks provide, at times, immediate support and resources, helping individuals manage the initial impacts of displacement. However, despite this communal support, the long-term resilience of these communities remains constrained by persistent poverty and vulnerability. However, even short-term efforts may yield positive outcomes towards resilience (Joakim et al., 2021).

5.4.2 Vertical social cohesion and community resilience

Structural hardships play a crucial role in limiting climate resilience. Economic constraints and the informal status of settlements in Old Fadama, Glefe, and Agbogbloshie severely restrict residents’ ability to relocate to less flood-prone areas or invest in protective measures for their homes. The immobility of residents, driven by a lack of resources, is a significant factor that compounds their vulnerability to environmental events. This economic and structural immobility underscores the need for greater support and intervention from political institutions to enhance community resilience. However, the absence of support from political institutions leads to a notably weak vertical social cohesion, and lack of vertical cohesion is a significant barrier to effective community resilience. Many respondents expressed a low level of trust in political institutions and highlighted the insufficient resources provided by these institutions during crises. This distrust and perceived neglect from higher authorities undermine the community’s ability to organise and implement collective resilience strategies. Structural hardships, including economic instability and inadequate infrastructure, further exacerbate this issue, making it difficult for residents to mobilise beyond their immediate social circles.

Environmental/climate-related events in the three communities are exacerbated by urban development challenges, contributing to low vertical trust in government institutions. In the focus group discussions, participants from the three communities mentioned the lack of proper urban

services and inadequate infrastructure that increases risk to environmental/climate events. Lack of proper urban design compounds the issues faced by the communities. Waste management, sanitation, drainage, housing, and road construction are at the core of Accra's urban planning challenges.

In terms of waste management, community members describe the lack of waste tanks or overfilled waste tanks. Self-employed waste collectors come and take the waste for money, but it is not clear where they take the waste to. In some cases, the collected garbage ends up in the gutters. The gutters are generally clogged and easily overflow during heavy rains. In addition, one community reported people from other communities dumping garbage in their streets. In the absence of a proper dumping site, some community members burn their garbage. It is reported that these fires and the general air pollution cause health problems. Concerning the gutters and tanks, one community member commented:

> Just one large gutter. Even that one is choked with rubbish. That shows that waste disposal is also a problem for us. We have just one tank for that, sometimes when you go there with your rubbish, you are told that it is full so return with your rubbish. We have people we call "kaya borlas" who collect money to take your rubbish. Sometimes after taking the money, they leave the rubbish just anywhere when nobody is looking. (FGD Agbogbloshie women)

Most community residents do not have private toilets and bathrooms at home. They rely on public washhouses, which have limited access. They must pay money to use these facilities. The washhouses have limited hours of operation. In addition, public washrooms are not enough to provide for all people in the community. Two residents summarised it as following: "So when someone constructs a toilet or bath, you must pay for every visit. If you want to bath, you must pay. Some places take two [Ghanaian] Cedis per visit. And the toilet too, you must pay. Only few people have toilets and baths in their homes." (FGD Agbogbloshie women). "The challenge with this community is that they do not include building toilets in their plan. When you can count about 100 buildings you may have three toilets in them so it's causing a lot of difficulties for people when they need a place to ease themselves." (FGD Glefe men). Only a few houses are connected to a drainage system. The existing structures are inadequate to deal with heavy rains and flooding. Without pipes and drains, water has nowhere to go but into the homes of residents.

With unclear land titles or little interest from the authorities in the communities, houses can be built at any time and on any land. Haphazard buildings can be found on waterways and gutters, obstructing the flow of water during extreme weather events. Community members described how houses built in flood-prone areas sometimes have walls around them, and when there is a flood, the walls of that house divert the water to other houses. The lack of planning is also evident in road construction. There are not many major or paved roads in the communities, leading to congestion and problems for ambulances in case of emergency. One community member described the situation as follows: "we don't have a proper layout. We are almost like 10,000 to 15,000 people in this community but we have only one road, so imagine 15,000 people using one road" (FGD Glefe men). The absence of adequate urban infrastructure and services compounds risk in the communities and exposes them to displacement. Lack of government support also diminishes the ability of the communities to cope with, absorb and prepare for climate events.

The absence of effective urban services such as adequate sanitation, effective waste management and urban infrastructure, exacerbates flood risks in the informal settlements. Despite exposure to flood risks, residents of the informal settlements are also inhibited in their ability to cope with these risks. Support from state institutions for climate-resilience-building efforts are minimal. Although, some efforts have been put in place, such as the construction of the sea-defence wall in Glefe, this project is yet to be completed, with only two kilometres of the wall constructed at the time of this research (Field observation, 13 February 2024). Vertical

social cohesion is thus threatened by the low resilience of the informal settlement dwellers. There is low trust in institutions to support residents to anticipate, adjust and absorb shocks associated with environmental/climate-related events.

6 Conclusions

As climate events in Ghana and worldwide are set to intensify in terms of their frequency and their effects on the population, it is important to understand how social cohesion manifests in climate-related displacement contexts, and what this means for community resilience. Here, the urban contexts are especially relevant, as many displaced people opt to live in cities. With ongoing urbanisation trends, cities such as Accra are experiencing population increase, while simultaneously facing climate-related events impacting vulnerable communities. The research questions touch upon the concepts of social cohesion and climate resilience. The main goal of the research was to better understand the current state of social cohesion in the communities of Agbogbloshie, Old Fadama and Glefe, and how social cohesion and climate resilience intersect. The data collection centred on questions of trust among the community members and towards political/authoritative actors, the role of different identities in the communities and the self-organisation of formal and informal activities. These experiences were related to climate resilience, in terms of how the community adapts, absorbs and anticipates climate/environmental related events.

In the communities, almost all the members experience climate-related events, be it in Accra or in other Ghanaian regions. If they did not experience them, they knew people who had to deal with the effects of extreme weather conditions. Individually and jointly, the community members react to the challenges in their communities, resulting in stronger community relations. The analysis of the focus group discussions has shown that climate-related events are prevalent in the communities besides other challenges related to urban planning. The relationship between climate resilience and social cohesion in Old Fadama, Glefe and Agbogbloshie is complex and multifaceted. Social cohesion in the communities is characterised by strong horizontal relations and weaker vertical relations. Strong horizontal social cohesion and trust among community members provide a foundation for potential resilience efforts. In particular, our research shows how social networks help community members to absorb shocks, albeit on a short-term basis.

While long-term resilience is the goal, we also admit that resilience itself as a concept must be examined. A question we were left with is whether community members should be responsible for long-term resilience efforts or whether the state needs to take its responsibilities more seriously to ensure both short- and long-term resilience. This critique is supported by our findings on the relationship between vertical social cohesion and climate resilience in the three communities where we observe that limited resilience efforts – short- and long-term – in the informal settlements contribute to low vertical social cohesion. At the same time, the lack of vertical cohesion and trust in political institutions, combined with significant structural hardships, limits the community's ability to effectively respond to environmental challenges collectively and over a longer period of time.

Self-organisation exists in the form of clubs and associations. However, their focus is predominantly on social issues, and less related to climate events. The strong horizontal relations play a role in managing the effects of climate events, but individual efforts are central to climate resilience in the three communities. For development actors, these existing social organisations can be leveraged towards supporting climate resilience efforts in the informal settlements by providing them with financial resources, technical support, etc. These channels are also relevant in the context of horizontal cohesion as long as efforts are made to ensure accountability within the groups and across other actors in engagement with the communities.

For these communities to enhance their climate resilience, there needs to be a concerted effort to bridge the gap between horizontal and vertical social cohesion. Strengthening trust in political institutions and improving resource allocation during crises are critical steps. Additionally, empowering community associations to take a more active role in resilience-building could leverage existing social cohesion to create more robust collective responses to environmental events. The vulnerability of informal communities to disaster risks, compounded by factors like hazardous geography and isolation from public services, amplifies the critical importance of resilience for affected communities. Social protection emerges as a critical element, showcasing its efficacy in reducing poverty and shielding vulnerable populations from the impoverishing impacts of various risks. These measures act as crucial buffers, offering financial and social support, preventing social disruptions, and enhancing adaptive capacity.

The discussion surrounding the concept of resilience brings to light the cyclical nature of vulnerability. Constructing resilience to avoid falling into recurring vulnerability cycles is crucial, encompassing not only the physical and infrastructural aspects but also economic and social dimensions. Therefore, a comprehensive approach that includes economic, social, and infrastructural strategies is necessary to build sustainable resilience. For example, it is imperative for the government to work with the communities to address the long-standing issue of land and housing insecurity. This might include providing formal land rights or relocation to economically, socially and physically suitable lands. Informal settlement upgrades may also be considered by the government in dialogue with the communities, which could strengthen social cohesion (Wang, 2023). Lessons can be drawn from similar informal settlement upgrades in other parts of Accra e.g. Accra New Town (Wang, 2023) and other parts of the world, for example in South Africa (Brown-Luthango et al., 2017; Marais & Ntema, 2013).

Ultimately, all these strategies, whether short-term or long-term, come down to available resources. Short-term solutions tend to be easier and cheaper, making them more accessible for many residents, but often providing only enough help to get through the current situation. Long-term solutions require significant investments that many cannot afford. Despite these challenges, community members continue to do what they can within their circumstances, often helping others when possible. Hence, as part of building long-term resilience but also strengthening vertical trust, there is a need for investment in social protection measures by government actors and development partners. Social protection programmes can help communities adapt, anticipate and absorb shocks, for example through cash transfer programmes that support affected residents after climate/environmental events, grants and other safety nets (Ulrichs et al., 2019).

For further research, several directions could be taken to refine and add to this research project. The concept of social cohesion (Leininger et al., 2021) was a useful tool to capture the different social dynamics in the three communities. However, social cohesion is very much context-based. The three pillars of trust, identity and cooperation for the common good do not always capture what is behind community relations. For example, it became clear during the focus group discussions that the concept of an inclusive identity did not resonate as much with the participants, as they had difficulties answering our questions related to identities in the community. Further research could consider how social cohesion in Ghana comes about and further refine existing concepts of social cohesion. Additionally, as the literature review and community description has already shown, a lot of research has been conducted in the three communities. While they remain vulnerable, it could be worthwhile studying other communities in Accra or other cities to halt accusations of “over-research”. For resilience, the focus group discussions could not extract as much information on individual capacities to deal with climate events. These individual capacities include income diversification and personal social networks. A survey could be a useful tool to gain more precise insights on individual capacities in reaction to climate events.

Overall, our research highlights the importance of strong community relations in managing climate-related events and the need for improved trust and cooperation between communities and political institutions to enhance climate resilience.

7 Recommendations

7.1 Address marginalisation and lack of basic urban services and infrastructure

- Efforts to address marginalisation of urban informal settlements is a necessary requirement by governmental actors (national, district and municipal) to bridge the relationship gap with the communities.
- Government actors and donors should work together towards permanent solutions for land tenure struggles in informal settlement communities. This could be done through the provision of legal titles, with full participation of the community in deciding the future of the settlements.
- Government actors, donors and the communities should work together towards settlement upgrades that include providing infrastructure for water, sanitation and hygiene.
- Government actors and donors must strengthen already existing support measures through partnerships with NGOs and local leaders. They must also increase needs-based solutions such as through social protection measures that enable the communities to build resilience to climate and environmental impacts.

7.2 Increase visibility and accessibility of support programmes

- Government actors and donors must increase awareness of support measures available to community members to deal with climate/environmental-related displacement. Awareness and accessibility of services, coordinated between local and national actors, will contribute to more positive vertical social cohesion.

7.3 Enhance communication channels to strengthen social cohesion and build resilience

- The community alongside government actors and partners must diversify information-sharing channels to avoid co-option by partisan interests.
- Government actors and donors must adapt to the needs of, and channels available to, communities.
- Government actors and donors must give information on progress of projects, and of why projects have stopped.

7.4 Promote inclusive community participation

- The municipal government, through assembly representatives, must continue to engage with the communities through a bottom-up approach.
- Efforts must be made to enhance more inclusive community participation among the diverse groups of people and political affiliations within the communities.
- Government actors and donors must increase financial and material resources for community engagement.

7.5 Invest in skills development and livelihood support to build resilience

- Community resilience is inhibited by impacts of disasters and displacement on livelihoods. Hence, government actors and donors must continue to promote and implement skills development programmes so that community members are economically empowered to absorb, adapt and anticipate shocks from environmental/climate-related events.

7.6 Maintaining existing horizontal social cohesion through existing local governance structure

- Traditional and other community leaders must continue to support community members in conflict resolution to ensure sustained horizontal cohesion.
- Traditional and other community leaders must continue to promote community events and support for community associations that breed peaceful cohabitation, trust and cooperation among members of the community.

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Appendix

Table A1: Focus Group Discussion Instrument (19 March 2024)

Category	Question	Sub-questions
1. Community/ neighbourhood	Could you please describe your neighbourhood or community?	Who lives in your neighbourhood? What kind of work are the people doing? Where do your neighbours come from? What languages do people in your community speak?
	What are your main problems with accessing basic social amenities day-to-day i.e. transportation, water, sanitation, waste disposal, electricity, health services, social welfare, schools, etc.	What barriers do you encounter? How does this affect your trust in authorities?
2. Experiences with displacement In our research, we look at experiences with displacement, by which we mean that someone had to leave the place where they were staying, e.g. because of flooding or drought that affected their income, or because of an eviction.	We would like you to please describe your own history with displacement or eviction. How did you come to live where you are living now? What climate events are happening? How often are they happening?	Did you face a situation where you had to leave your home or couldn't? *If no*: A family member? A neighbour? What kind of displacement/ eviction did you experience? What were the reasons for leaving your home? From where to where did you move? For how long have you been living here?
		How has this experience of (displacement and/or evictions) affected your relationship with others in your community?
3. Resilience **(adaptive/absorptive capacity)**	You said you experienced XXX, when it happened, what did you do? What types of resources do you rely on to cope with flooding, rainfall, coastal erosion/ sea-level rise, heat islands? Can you describe any support/efforts (programmes) that help or have helped you (and others) cope with environmental events? Are there any programmes you are not benefitting from (barriers, hindrances)?	Are these resources individual, family, community resources, for example savings; social safety net; support group; association For example, social protection programmes and social safety nets (e.g. cash transfers, cash support from family/friends, education programmes, savings, insurance, health support, accommodation (e.g., tents), schools What is the role of...? — chiefs — churches, mosques — politicians/ assembly members — NGOs (e.g. PD) — NADMO — AMA

Category	Question	Sub-questions
	How do these support/efforts help you feel connected or disconnected to others in your community? To these authorities?	How do these efforts help you build trust with others or lead to feelings of distrust in others in your community? And in authorities?
	Are you aware of any other programmes/ support efforts by governments/ local authorities/ NGOs addressing climate change/ environmental/ displacement issues?	For example, monthly AMA cleanup efforts in the communities Do you feel like there are enough efforts? Do you have access to these programmes/ support efforts? How do these efforts help to foster trust with your community or in authorities?
4) Resilience (anticipatory capacity)	You said that you (or others) experienced XY (environmental event/ displacement); if it or another environmental event were to happen again, how prepared are you (or they)?	How would you (or others) react?
	How do you feel about your future regarding flooding, coastal erosion, evictions …? How far are you able to plan ahead?	
	Where do you get information on flooding, evictions, coastal erosion from? i.e. TV, radio, community announcements, public announcing systems, neighbours (through early warning systems)	How is information shared in your community?
5) Social cohesion (inclusive identity)	You mentioned belonging *to different* ethnic groups/religions. How does this affect your standing within society?	Can you describe your feelings about it? Do you feel as though you belong? Is being (XXX) important to you? Why? How does being a woman/man affect your standing within the neighbourhood?
	What other identities matter to people where you live?	
6. Social cohesion Trust (social/ horizontal)	How much would you say you trust others in your community?	How much would you say you trust people with other identities — other ethnic groups — other languages — other religious beliefs Did it change in recent years/ months? Why?
	What are the challenges of living together/ co-existence/ in the community/neighbourhood for you?	

Category	Question	Sub-questions
	Have you noticed any conflicts lately (between communities, ethnic groups, neighbours, friends)? How have conflicts been resolved?	Were external actors informed or called (e.g., community/religious leaders, police)?
8. Social cohesion **Trust (institutional/ vertical)**	How much would you say you trust (local leaders and) government actors to do good things for the community in general? And to respond to disasters? Can you elaborate on the reasons for your trust/distrust (examples)? Did it change in recent years/ months?	— tax collectors — police — AMA — NADMO — national government — neighbourhood watch/police Do you refer to formal or informal authorities (tax collectors, police, ...)?
9. Cooperation for the common good **(intergroup/ horizontal)**	What groups/clubs/civil society organisations/associations/circles that people join or attend in your community are you aware of?	
	Are you participating in any of those groups? Describe your participation (what, how often…)	Why, why not? What issues are raised in those groups?
10. Cooperation for the common good **(state-society/vertical)**	Have you ever (in recent years/months) contacted someone official (local government councillor, Member of Parliament, official government agency, traditional leader…) about an important problem or gave them your views?	Do you feel as though you could contact them?
	Do you know about Community Assemblies/meetings in your settlement? Do these meetings/assemblies help the community?	Did you participate in any? What issues were raised? *If no:* What are reasons for not attending? Who represented the community (individuals or through representatives/chairmen/leaders)? What were the outcomes/follow-ups?