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Institutionalised Tools for Addressing the Climate Crisis in Cape Coast, Ghana

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The climate crisis presents significant challenges for many African cities, impacting their economies, ecosystems and the livelihoods of their inhabitants. This paper explores into the various tools and techniques that local government administrations are employing to adapt to these challenges. Using Cape Coast Metropolitan Assembly in Ghana as a case study, a combination of focus group discussions and informal interviews was held with key stakeholders. The findings revealed a multifaceted narrative of vulnerability and adaptation, highlighting the importance of education and capacity building in institutionalising effective climate governance. Ongoing engagement with stakeholders is also considered crucial for refining existing strategies and discovering innovative solutions that address the unique challenges posed by climate change in the region.The paper concludes that incorporating informal practices often deeply rooted in local culture can enhance formal policy initiatives. This integration fosters a more comprehensive and effective approach to climate governance at the sub-national level.

Keywords: *climate crisis, institutionalised tools, local government, Cape Coast, Ghana*

Introduction

The rapid urbanisation of Africa is one of the continent's most significant socio-economic transformations, evidenced by an annual growth rate of about 3.6% from 2005 to 2015.[2] This trend is projected to accelerate, with estimates suggesting that urbanisation levels may surpass 60% by 2050.[3] The African Development Bank emphasises that much of this growth is being driven by the expansion of small towns and intermediary cities, raising urgent concerns about urban climate resilience.[4]

As urban areas continue to grow and expand, they become more vulnerable to the unpredictable nature of climate variability and the increasing frequency of extreme weather events.[5] Over the past thirty years, extensive research and analyses have been

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[2] UN-Habitat 2020.
[3] UN DESA 2019.
[4] ADB 2016.
[5] IPCC 2023.

conducted, primarily focusing on climate adaptation policies and plans in well-established, larger developed cities.[6] For instance, Salvia et al. (2021) analysed 327 cities in the EU with a Climate Change Adaptation Plan, Reckien et al. (2018) analysed 885 across the EU28 and Otto et al. (2021) found that 104 of the largest cities in Germany have climate change mitigation plans.[7]

Over the last three decades, extensive research and analyses have been conducted, primarily focusing on climate adaptation policies and plans (CAPS) in well-established, larger developed cities. This body of work seeks to understand how cities are preparing for the impacts of climate change, and it emphasises the necessity for effective strategies to reduce vulnerability and enhance resilience. For instance, climate change mitigation plans of the 103 largest cities in Germany were examined, and it was essential to know that cities are not only reducing their carbon footprints but are also equipped to handle the immediate effects of climate variability.

Their research indicated a growing acknowledgement among urban decision-makers of the need for comprehensive strategies that not only address the mitigation of greenhouse gas emissions but also integrate resilience measures to prepare for climate-related risks. This dual approach is essential in ensuring that cities are not only reducing their carbon footprints but are also equipped to handle the immediate effects of climate variability.

However, there is a noticeable gap when it comes to the rapidly urbanising cities.[8] These cities, often characterised by their burgeoning populations, are facing unique challenges related to climate change that demand urgent attention.[9] The lack of comprehensive studies on these regions highlights the need for tailored climate adaptation plans that recognise the specific vulnerabilities and resource constraints these cities encounter.[10] As the world becomes more urbanised, the call for equitable solutions that account for the diverse realities of all cities, both developed and developing, becomes important.[11]

To this end, the notion of institutionalised tools and mechanisms is central to this paper. These tools can be framed as systematic actions undertaken by local governments to integrate climate governance into their urban management practices, extending beyond policy formulation.[12] Existing research has largely neglected how municipalities in developing countries can proactively adapt to climate challenges through the institutionalisation process.

Studies surrounding the institutionalisation of climate change emphasise the importance of incorporating climate adaptation strategies into routine decision-making within urban environments.[13] Ostrom's Institutional Analysis and Development (IAD) framework serves as a valuable lens for understanding this dynamic. The IAD framework aids actors in achieving their objectives in confronting societal problems, and it frames

6 Araos et al. 2016.
7 Otto et al. 2021.
8 Fila et al. 2023.
9 Birkmann 2016.
10 Hoppe 2019.
11 Fila et al. 2023.
12 Olazabal et al. 2024.
13 Patterson–Huitema 2019.

organisations as entities governed by a set of rules, constraints and patterns of interaction that define their structure.[14]

Despite the challenges local administrations face concerning urban climate change governance, there are opportunities to institutionalise existing tools and techniques that can reinforce climate adaptation efforts.[15] This paper offers a detailed exploration of Ghana's Cape CoastMetropolis, focusing on the tools and techniques successfully integrated into the local government system address the climate crisis. It presents a model that other urban areas facing similar challenges can follow.

Ghana, like many developing nations, deals with governance and socio-economic challenges that complicate its response to the climate crisis.[16] Despite over thirty years of climate change governance at the national level, there remains a lack of robust adaptation efforts at the local administration level.[17] This gap raises questions about how cities can integrate climate resilience into their governance frameworks.

Methodology

This research incorporated qualitative methods, particularly focus group discussions and informal interviews with various stakeholders, including local government officials, community leaders and residents in Cape Coast. This approach enabled a comprehensive understanding of local attitudes toward climate change adaptation and the tools being utilised.

Selection of the case study

This paper focuses on Cape Coast, a city exemplifying the challenges and vulnerabilities faced by rapidly urbanising municipalities in Ghana. Cape Coast is uniquely positioned as one of the most susceptible cities to climate change, attributed largely to its significant exposure to excessive flooding and coastal erosion. The Metropolis, steeped in historical significance, is characterised by a burgeoning population that reached an estimated 189,925 inhabitants according to Ghana's 2021 Population and Housing Census.[18]

Geographically, the city is located along the southern border of the Gulf of Guinea, benefiting from a tropical savanna climate that includes two extended wet seasons; the heavier rainfall period extends from March to July, while a lighter wet season occurs from September to November. Additionally, the climate features two shorter dry periods in January–February and August.

[14] Ostrom 2005; 2011.
[15] Valdivieso et al. 2017.
[16] Adu-Boateng 2015.
[17] Musah-Surugu et al. 2019.
[18] Institute for Health Metrics and Evaluation 2021.

Over the years, extensive human activities, including farming, charcoal production and bushfires, have significantly altered the region's original dense scrub vegetation, resulting in secondary vegetation that is less dense compared to the interior forest areas. The rapid urban expansion, spurred by the burgeoning population and associated socio-economic activities, poses further challenges to the local ecological balance.

Cape Coast's economy is dynamic and heavily reliant on fishing, trade, tourism and various hospitality-related ventures. However, this economic growth comes at a notable cost, as competition for land between agricultural use and housing development leads to substantial negative impacts on the natural environment. Alarmingly, the Ghana Statistical Service (GSS) reports a rapid depletion of the city's vegetation cover, exacerbating vulnerabilities related to climate change.

Inundation from increased flooding has severely damaged infrastructure and disrupted both residential and commercial enterprises, contributing to water pollution and exacerbating land erosion. Coastal communities serve as case studies of this threat, often experiencing destructive flooding leading to building collapses during heavy downpours.

Extreme weather conditions have adversely affected sectors such as agriculture and fisheries, leading to diminished marine ecosystems and fish supplies, and even the extinction of certain fish species. Collectively, these factors translate to critical management challenges that hinder the sustainable development of the municipality and the responsible use of its water resources.

Given this context, Cape Coast presents an insightful case study for examining local administrative responses to the climate crisis, particularly focusing on the institutional processes shaping climate adaptation strategies.

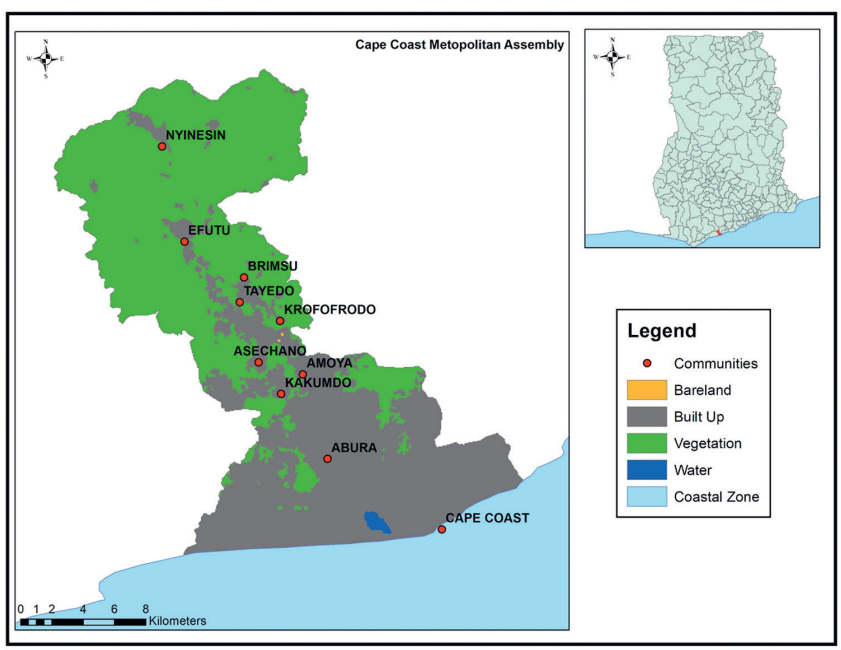

Figure 1: Location map of the study area

Figure 2: Palm trees are planted along the Cape Coast beach

Figure 3: Construction of a sea defence wall to prevent coastal erosion

Figure 4: Growth of Informal Settlements in the Cape Coast Metropolis

Source: compiled by the author

Data collection and analysis

This research employed a case study approach to thoroughly understand the dynamics at play within Cape Coast. Key data were gathered through focus group discussions and informal conversations with stakeholders involved in urban development within the city. The objective was to gain insights into their perspectives regarding vulnerabilities to climate change, the effectiveness of ongoing adaptation efforts, and the tools and practices currently being utilised to institutionalise climate governance.

To facilitate a comprehensive dialogue, a stakeholder workshop was convened in May 2022, which attracted approximately twenty-seven participants from various governmental and non-governmental organisations actively engaged in climate action initiatives. The workshop served as a vital platform for discussing the climate vulnerabilities of the Metropolis, fostering collaborative discourse on the emerging instruments and mechanisms essential for advancing climate policy and governance within the locality.

These interactions provided critical insights into community knowledge, existing practices and potential areas for improvement. Informal interviews further enriched the data, contributing personal narratives and localised insights that highlighted the cultural dimensions of the climate response.

Before conducting the workshop, a meticulous stakeholder mapping exercise was performed to ensure an equitable representation of both governmental and non-governmental entities in the participation pool. An expert sampling technique guided the selection of stakeholders, focusing on their roles and responsibilities within their organisations. These strategic selection criteria emphasised the importance of knowledge depth, ensuring that at least two officials from each sampled organisation were included to facilitate robust discussions.

During the workshop, participants were divided into five diverse teams, allowing for a balance of expertise and perspectives. Each group addressed key issues relevant to the overarching subject of climate governance, which encouraged a more nuanced debate surrounding the core challenges. Additionally, informal conversations with various officials were conducted post-workshop to complement the insights gathered during the event, elucidating how different governance mechanisms operate in practice.

Results

The analysis identified some tools institutionalised by Cape Coast's local government to address the climate crisis.

Medium-term development plans

The absence of a robust local-level climate policy or action plan in the Cape Coast Metropolian Assembly hinders effective adaptation and mitigation efforts and risks exacerbating existing vulnerabilities. Studies have indicated that the overwhelming focus on national interests often neglects local adaptations for fostering climate resilience. The integration of climate change adaptation into the operations of the Cape Coast Metropolitan Assembly is increasingly recognised as essential, particularly in the absence of explicit local climate policies.

In this regard, the focus group discussions highlighted that the formulation of a medium-term development plan is a key strategy in this context. These plans serve not only as a guide for local governments but also align with broader national priorities and regulatory frameworks established by the National Development Planning Commission (NDPC). In Ghana, local governments are mandated to create and submit these medium-term development strategies, which must explicitly consider the need for resilience against potential climate-related risks and challenges. This requirement emphasises the proactive role that local authorities play in ensuring that their development frameworks are robust enough to withstand the impacts of climate change, such as extreme weather events, rising sea levels and other environmental stresses.

The informal interviews conducted with various stakeholders also revealed that the medium-term development plan offers a vital opportunity to frame local priorities and needs accurately. This is particularly important as some national policy directives may not fully address the unique circumstances and challenges faced by specific local jurisdictions. By adopting a tailored approach, local authorities can better respond to the pressing climate issues that impact their communities, ensuring that the measures implemented are relevant and effective.

The identification of these priorities reflects a comprehensive understanding of the specific climate challenges faced by local jurisdictions. By addressing these concerns, medium-term development plans can significantly contribute to both environmental sustainability and socio-economic development. Ultimately, this holistic approach not only enhances the resilience of communities but also improves the overall quality of life for residents through increased economic opportunities and improved environmental conditions.

Environmental impact assessments

Environmental permitting is a critical tool for managing climate change impacts in urban settings. This mechanism allows local governments to systematically evaluate the potential environmental impacts of proposed development projects before they are approved. By implementing Environmental Impact Assessments (EIAs), authorities are provided with a structured approach to identify, assess and mitigate negative environmental effects, ensuring that urban development aligns with sustainability objectives. The Ghana Environmental Protection Agency (EPA) plays a pivotal role in overseeing this process, ensuring compliance with national environmental standards.

Some crucial regional offices play pivotal roles in supporting project developers in urban areas, with the Environmental Protection Agency (EPA) and the Land Use and Spatial Planning Authority (LUSPA) being noteworthy examples. The EPA conducts environmental impact assessments (EIAs) for various projects, ensuring compliance with environmental regulations. This encompasses a range of development activities, such as the establishment of tourist attractions, hotel facilities, manufacturing plants, fuel and gas stations, and mining operations. The goal is to ensure that such developments do not significantly harm the environment or violate existing laws.

Meanwhile, LUSPA is responsible for the issuance of building permits, with a focus on promoting sustainable and economically viable human settlement development. Their activities ensure that planning adheres to sound environmental principles. Additionally, LUSPA provides zoning schemes aimed at protecting vulnerable areas from encroachment and climate-related hazards. The authority also has a vital role in regulating physical developments in ecologically sensitive regions, including forests, nature reserves, wetlands and other critical environments.

In Cape Coast, the EIA process is tailored to accommodate both small-scale and large-scale projects. Small-scale initiatives undergo a rigorous screening process designed to evaluate their environmental impacts. The screening results guide the issuance of environmental permits by the EPA. These permits are instrumental in allowing projects to commence while mandating that any environmental deficiencies identified during the assessment are effectively addressed.

For larger projects, particularly those that encounter community opposition, the EPA adopts a more inclusive approach by organising public hearings. These gatherings serve as a platform for community members to voice their concerns and suggestions, fostering a participatory process in decision-making. Notably, the requirement for two-thirds of the panel members to be residents of the local area ensures that the interests and needs of the community are well represented. This not only enhances the legitimacy of the decision-making process but also cultivates a sense of ownership among community members regarding local development projects.

When a project receives approval, the EPA takes proactive measures to communicate the decision widely. This includes sharing details with local authorities and making the information accessible to relevant stakeholders. A critical component of this transparency is the dissemination of a 21-day public notice alongside the final Environmental Impact

Statement (EIS) report. This practice underscores the commitment to community engagement, allowing stakeholders the opportunity to review and comment on the findings and implications of the EIA.

The institutionalisation of the EIA process is paramount for advancing effective climate governance. By establishing robust mechanisms for monitoring and accountability, local governments can systematically track the implementation and outcomes of climate-related actions. Such monitoring is vital for assessing the effectiveness of local climate policies and ensuring that they deliver the intended environmental, social and economic benefits.

Regular reporting is an essential facet of this accountability framework. It not only enhances transparency in governance processes but also builds community trust in local authorities. Engaging the public and local stakeholders in evaluating the success of climate initiatives offers governments invaluable insights, enabling them to adapt and refine practices based on real-world feedback and experiences. This iterative process is crucial in leading to more effective and resilient urban environments that can better withstand the challenges posed by a changing climate.

The integration of climate change considerations into urban planning through regulations, environmental permits and ongoing monitoring is vital for developing sustainable cities. By facilitating a structured EIA process, local governments can ensure that urban development practices contribute positively to environmental resilience, community well-being and sustainable growth. As cities continue to evolve in response to climate change, the role of EIAs and effective community engagement will be instrumental in shaping urban landscapes that are not only resilient but also equitable and environmentally responsible.

Education and capacity building

The findings of this study indicate that education and capacity building are fundamental tools that contribute significantly to the institutionalisation of climate change responses. A critical observation from the research is that while awareness of climate change issues is growing, many stakeholders still lack comprehensive knowledge about the specific measures being implemented at the local level. This gap underlines the need for ongoing educational initiatives to enhance understanding and engagement among community members and officials alike.

Stakeholders emphasised the necessity of ongoing educational initiatives, as some participants expressed a limited understanding of climate change issues and the adaptation strategies being deployed at the local level. Educational programs focused on climate issues have been instrumental in fostering awareness and encouraging community involvement in adaptation strategies. Local workshops and outreach initiatives serve to empower residents with knowledge about climate change and its local implications. The emphasis on strengthening human resources through targeted training programs is critical, given that effective climate governance hinges on a well-informed and proactive leadership base.

Stakeholder responses indicated an increasing awareness of the importance of integrating climate education into urban planning and development processes. Educational initiatives should encompass a wide array of topics, including practical climate adaptation strategies, environmental management and community engagement approaches, which can empower officials and the community at large to navigate the complexities of climate change impacts effectively.

Moreover, ongoing capacity building efforts not only equip stakeholders with the necessary skills but also foster a culture of collaboration and shared responsibility in addressing the climate crisis. Participants noted that when stakeholders are well-informed and trained, they are more likely to contribute meaningfully to discussions and decision-making processes, enhancing the overall resilience of Cape Coast to climate pressures.

Ghana's National Climate Change Adaptation Strategy calls for a multi-sectoral approach to effectively address climate challenges; however, the actual implementation of these strategies must occur at the local government level.[19] The capacity of local government officials must be considered during the process of mainstreaming climate adaptation strategies into existing frameworks. To this end, local governments have initiated various climate change awareness and sensitisation programmes aimed at improving community engagement in climate issues.

For instance, a recent consultative forum on climate change and flooding facilitated by the National Disaster Management Organisation (NADMO) brought together residents and officials to discuss the local implications of climate change. During this event, NADMO officials presented historical shoreline maps, illustrating significant erosion caused by local activities. This presentation had a profound impact on attendees, many of whom were unaware of how their actions contributed to increased flooding risks. The forum was attended by influential religious and community leaders, signalling a collective commitment to addressing these challenges.

Additionally, the research indicates that climate change awareness and sensitisation programmes are regularly conducted for diverse groups, including senior high school students, church congregations, university students and various local communities. These sessions often cover critical topics such as waste management and broader environmental management practices. The National Development Planning Commission (NDPC) has also been cited as a significant player in organising targeted workshops. These workshops aim to equip regional and local officials with essential knowledge, enabling them to support Metropolitan, Municipal and District Assemblies (MMDAS) in embedding climate change adaptation efforts within their medium-term development plans (MTDPS) and annual budgets.

Taboos and indigenous knowledge

Indigenous knowledge and practices, particularly in the form of taboos, have emerged as vital mechanisms for environmental protection. Taboos create strong social norms

[19] Government of Ghana 2012.

that prohibit harmful actions toward specific species, habitats, or natural resources. Often rooted in spiritual beliefs, these cultural norms reinforce the idea that violating such taboos could lead to detrimental consequences not only for individuals but for the entire community. This reliance on cultural norms serves as a complementary approach to regulatory measures and contributes to the preservation of ecosystems.

A poignant example of how local communities adapt to the climate crisis is found within practices observed in the Cape Coast Metropolitan Assemblys. Certain days are designated as fallow periods during which smallholder farmers and fishermen are prohibited from utilising their resources. This practice is based on the belief that these rest periods allow the sea and rivers to naturally replenish, ultimately fostering sustainability and continuity in the ecosystem's functionality. Participants in the research highlighted that such practices are crucial in allowing various ecosystems, including forests, rivers and seas to recuperate, which is essential for long-term environmental conservation.

Another noteworthy adaptive strategy involves the traditional preservation of mangroves and wetlands, with locals believing that spiritual entities inhabit these areas. To protect these crucial resources, traditional prayers are often conducted to appease the gods, thereby ensuring the availability of freshwater critical for local fishermen's livelihoods. Beyond their practical importance, forests and wetlands are often revered as sacred spaces, housing ancestors and deities that have historically supported the community. This intertwining of spiritual beliefs and environmental stewardship enhances cultural identity and encourages a communal commitment to ecological preservation.

In contrast to the typical response of many nations, which often involves erecting hard infrastructure like sea walls to shield against tidal waves and flooding, local communities in the Cape Coast opt for alternative strategies. For instance, they commonly utilise solid waste to create barriers against encroaching tides. This innovative approach reflects a grassroots-level responsiveness to environmental challenges. To further improve these adaptive measures, governments need to enact laws that facilitate the delegation of decision-making authority to local bodies.

The inclusion of local ecological knowledge has proven effective in developing context-specific adaptation strategies. Community members often possess valuable insights regarding agriculture, resource management and disaster preparedness, which can greatly enhance formal climate policies. The findings underscore the importance of an integrated approach to climate governance that incorporates both formal policies and informal practices. The recognition of local knowledge as a legitimate tool in climate adaptation reflects a broader trend towards participatory governance models. By valuing indigenous practices and community input, local governments can enhance their legitimacy and effectiveness in implementing adaptation strategies.

Investing in local capacity and actively engaging local actors in sustainable energy projects can significantly invigorate Ghana's economy. By fostering local ownership and enhancing employment opportunities, these initiatives have the potential to uplift the livelihoods and well-being of countless individuals residing in rural and remote areas across the African continent. Such strategies not only address immediate environmental challenges but also lay the groundwork for sustainable community development and resilience against future climate adversities.

Community engagement with non-governmental and civil society organisations

Addressing the impacts of climate change necessitates a collaborative approach that involves a diverse array of stakeholders, including government entities, non-governmental organisations (NGOs), the private sector and academic institutions. Effective implementation of national climate policies requires concerted efforts from all these parties. Informal discussions with key stakeholders revealed the existence of decentralised ministries, departments and agencies that facilitate this collaboration.

Research participants noted that while this stakeholder network has received recognition at the national level, the model has the potential to be replicated across other municipalities and local governments. It would need to be tailored to fit specific demographic, economic and local conditions concerning climate change mitigation and adaptation efforts.

Partnerships with non-governmental organisations and civil society groups have facilitated the implementation of community-led climate initiatives. These collaborations provide additional resources and expertise, amplifying the impact of local government efforts. Additional evidence of how climate change could be embedded within urban governance can be seen through the strategic maximisation of the impact of non-governmental organisations (NGOs) and civil society organisations (CSOs) at the local level. These entities are instrumental in promoting inclusive and participatory decision-making processes that actively engage local communities, Indigenous groups and a diverse array of stakeholders in the planning, implementing and evaluating climate adaptation policies and programs.

This collaborative approach ensures that local knowledge, needs and perspectives – essential elements that reflect each community's unique context – are effectively integrated into crucial decision-making processes. In discussions held in Wa and Cape Coast, several NGOs shared valuable insights on how such a participatory culture has normalised within their constituencies.

One of the stakeholders illustrated how establishing NGOs has proven to be a robust mechanism for increasing awareness across various crucial areas, such as climate resilience, disaster risk reduction, sanitation issues and overall environmental management. These organisations have played a significant role in educating the public and mobilising community action around these pressing issues. Government officials recognised that the NGOs and CSOs that have established effective partnerships with governmental bodies have overcome typical challenges. Their active involvement in various projects has enhanced community engagement and fostered better communication and collaboration between the government and the local populace.

Furthermore, research participants in Cape Coast noted the emergence of youth-led advocacy organisations that primarily focus on promoting environmental sustainability and community development. These organisations are vital in empowering and equipping young people with the skills and knowledge necessary to advocate for ecological education and sustainable practices. Among these groups, the Green Africa Youth Organization is a recognised actor in the Cape Coast Metropolitan Assembly. This organisation has been working with local communities to address specific groups' vulnerabilities, such as

children, youth and women. These groups often bear the brunt of climate change impacts, exacerbated by existing social and structural inequalities. By focusing on these initiatives, the Green Africa Youth Organization aims to enhance resilience against climate-related challenges and promote social equity within the community.

Through these interconnected efforts, the role of NGOs and CSOs becomes increasingly vital in shaping urban governance frameworks that prioritise climate change adaptation, promote social inclusion and empower vulnerable populations. Their ongoing commitment to stakeholder engagement and community capacity building underscores the potential for transformative change in addressing the urgent challenges posed by climate change at the urban level.

Discussion and conclusion

In Ghana, the government has formulated and implemented national policies aimed at tackling the pressing effects of climate change. Among these pivotal frameworks are the National Climate Change Policy (NCCP), the National Climate Change Adaptation Strategy (NCCAS) and the National Climate Change Master Plan. These documents are crafted with the intent of guiding the nation's action against climate vulnerabilities. They are put into operation through a governance structure that involves various stakeholders, each with their distinct roles and responsibilities woven into the climate action tapestry.

While Ghana has made commendable progress on the national level, a significant hurdle persists: the lack of dedicated and effective local climate policies.[20] This gap restricts the ability of local authorities to autonomously manage climate challenges, compelling municipalities to seek external funding for most of their initiatives. However, this dependence on national resources creates further complications, especially for long-term projects that require sustainable financing and commitment.

Who are the stakeholders involved?

Given that the effects of climate change are most acutely felt at the local level, municipalities are crucial players in adaptation strategies. Yet, the extent of responsibility and the scope of actions assigned to local authorities differ dramatically from one country to another and even within diverse communities in Ghana itself.

At the heart of Ghana's climate governance framework is the Ministry of Environment, Science, Technology and Innovation (MESTI), headquartered in Accra. MESTI is responsible for formulating and executing the NCCP, benefiting from the technical support provided by the Environmental Protection Agency (EPA). The EPA plays a crucial role in coordinating Ghana's participation in international climate agreements. Although the EPA has its main office in the capital, its reach spans several regional and district offices across the country. Notably, these regional and district offices often lack dedicated climate

[20] Boateng 2023a; 2023b.

change units, which raises pressing concerns regarding their capacity to effectively address the unique climate issues inherent in local settings.

Beyond MESTI and the EPA, a myriad of ministries, departments and agencies (MDAs) have established their climate change units. For instance, the Forestry Commission boasts a Climate Change Unit, while the Energy Commission has divisions dedicated to renewable energy, energy efficiency and climate change matters. Despite these essential roles, there remains a contrast between the levels of engagement and capacity between national and local governments, often leaving local authorities out of crucial climate-related conversations.

Yet, a pattern of institutional fragmentation complicates the landscape of climate governance in Ghana's local government. The absence of a cohesive framework to facilitate inter-agency collaboration exacerbates this issue, forcing governmental bodies to operate in isolation rather than forming synergistic partnerships that could bolster climate resilience. Efficient governance mandates a comprehensive approach, where multiple layers of government and stakeholders cohesively devise and execute climate strategies.

The predominant emphasis on national-level initiatives often overshadows the essential functions of local administrations. The Ministry of Local Government has a role to play in climate issues via the Metropolitan, Municipal and District Assemblies (MMDAs), yet their active participation in the formulation and execution of climate change policies has been markedly limited. Research by Musah-Surugu et al. (2018) underscores the fragmented nature of sub-national governments, which frequently grapple with insufficient leadership and an absence of proactive measures. Many local governments typically engage with climate change projects only when initiated by central government directives, lacking the initiative to spearhead their localised initiatives.

While subnational actors possess vital insights and capacities, their involvement in formulating national policies remains minimal. This reality presents a troubling top-down approach that overlooks the valuable contributions that district-level representatives can offer to national debates. Such restricted participation signifies that local governments may not adequately tackle the unique climate challenges affecting their communities. A more equitable distribution of responsibilities and resources between the national and local spheres could significantly enhance the efficacy of climate response measures throughout Ghana, enabling all stakeholders to play a meaningful role in the nation's climate agenda.

The assumption that local representatives will adequately consult their communities before attending national workshops further amplifies the disconnect between various governance levels. The lines separating national, regional and municipal governance appear increasingly blurred, reflecting a crowded yet ambiguous governance landscape. This ambiguity, paired with overlapping authorities and roles, engenders confusion and, ultimately, hampers effective urban climate action.[21]

Additionally, the findings illuminate a conflict between national policies and indigenous knowledge systems. This tension underscores a broader struggle to harmonise modern scientific methodologies with time-honoured local traditions, which can result in missed

[21] Mitlin–Dodman 2015.

opportunities for incorporating effective climate adaptation strategies.[22] Local chiefs, as traditional custodians of natural resources, play an indispensable role in upholding sustainable practices.[23] However, their knowledge and expertise must be better integrated into formal climate governance frameworks to maximise their potential to foster resilience and sustainability within their communities.

In summary, the case of Cape Coast offers an illustrative example of how effective climate governance can arise from a thoughtful blend of educational initiatives, active community engagement and the meaningful integration of local knowledge. In this context, a deeper and ongoing engagement with stakeholders emerges as a pivotal strategy, essential for refining existing policies and for innovatively addressing the unique challenges that climate change poses to the region.

This narrative points out the perception that while formal top-down policies play a critical role in tackling the complexities of climate change, the power of informal practices deeply rooted in local culture cannot be overlooked. These cultural practices not only complement formal strategies but also enhance their effectiveness, making them vital components of a comprehensive response to climate issues. For cities in developing nations that face similar climate-related adversities, the insights derived from the experience of Cape Coast offer a valuable roadmap for fostering resilience. They encourage a more holistic approach to climate adaptation that is both practical and culturally sensitive.

As we look to the future, local administrations must embrace the institutionalisation of these adaptive tools. Doing so will enhance their capabilities in effectively managing climate risks, ultimately strengthening the community's resilience against the ongoing impacts of climate change. Furthermore, the study accentuates the importance of ensuring that these tools are not only implemented but also sustained in the long term.

As cities like Cape Coast navigate the enduring challenges presented by climate change, the adoption of a pluralistic governance framework becomes increasingly crucial. This framework should encompass a diverse range of methods and perspectives, fostering a more inclusive approach that empowers communities and leverages local knowledge. By doing so, Cape Coast and similar cities can cultivate a robust response to climate change that is both adaptive and sustainable, ensuring a better future for their residents and the environment alike.

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[22] Pasquini–Shearing 2014.
[23] Frick-Trzebitzky 2017.

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