Role of Governance in Implementing Climate Change Adaptation Strategies in the Congo Basin Case of Cameroon and the Democratic Republic of Congo

ABSTRACT

The low adaptability capacity of the Central African sub-region to climate change has made it one of Africans' most vulnerable sub-regions in the continent as this sub-region depends heavily on resources sensitive to climate change. Cameroon and the Democratic Republic Congo arehost to the world's second largest rainforest after the Amazon. This implies that climate change will undermine development in this sub-region and the rest of the continent as the effects of climate change are faced more by the most vulnerable. There is however rising interest in SSA to mitigate and adapt climate change solutions. While such efforts exist, knowledge on the governance arrangements exist in very fragmented forms. Specifically, knowledge on how global climate changes processes is reflected in national policies remain relatively less studied. So too are their limited evidence on how national policies play out at local level. Such knowledge deficits stall scientific evidence building and policy orientation to strengthen climate adaptation practices in countries of SSA, with Cameroon and DRC being classical examples. Yet theory building on climate change governance requires such context specific evidence. In addition, for a comprehensive policy to be adopted and made effective, climate change actions require such scientific evidence. This therefore validates the need to analyze how such global processes are framed into national policy and policy instruments for climate mitigation and adaptation, and to establish the connections and disconnections between what is framed at national level and what applies at local level in terms of climate change policy instrument and what explains such variations. Though effective climate action requires political commitment, well-aligned multi-level governance and institutional frameworks, laws, policies and strategies, as outlined by the Intergovernmental Panel on Climate Change (IPCC), there is still need for clear goals, adequate finance and financing tools, coordination across multiple policy domains, and inclusive governance processes in Cameroon and the Democratic Republic of Congo to harness these goals. This study investigated the role of governance in implementing climate change adaptation in Cameroon and the DRC. This research therefore aimed at examining the role of governance in implementing climate change adaptation strategies in Cameroon and the DRC. The study made use of primary and secondary data which was analyzed using content analysis to triangulate the relationship that exist between governance and the implementation of climate change adaptation strategies in Cameroon and the DRC. Results highlight the dominant role of governance in shaping adaptation efforts, challenges in implementation, spatial disparities, and the influence of national policies and stakeholder engagement. Policy recommendations emphasize the need for improving governance structures, enhancing stakeholder participation, mainstreaming gender considerations, and addressing financial constraints to build resilience and effectively respond to climate change impacts in both countries. The findings underscore the importance of context-specific strategies that prioritize inclusivity, transparency, and collaboration to address the complex challenges posed by climate change.

Keywords: climate change, governance, implementation adaptation

1.0 Introduction

Climate governance is the effective management of the global climate system to mitigate the negative consequences of climate change on man and his environment it is therefore important to set up

mechanisms to properly govern the management of climate change Pillar (2022). “However, building effective collective mechanisms to govern impacts on the climate system at the planetary level presents particular challenges, such as the complexity of the relevant science and the progressive refinement of scientific knowledge about our global climate and planetary systems, and the challenge of communicating this knowledge to the general public and to policy makers. There is also the urgency of addressing this issue; the Intergovernmental Panel on Climate Change (IPCC) has underlined that the international community has a narrow window of opportunity to act to keep global temperature rise at safe levels. Modern international climate governance is organized around three pillars: mitigation, adaptation and means of implementation. Under each pillar are many issues and policies, illustrating the many ways climate change affects thesociety” Pillar (2022)

“In the early decades of the 21st century, a paradox rose between rising awareness about the causes and consequences of climate change and an increasing concern that the issues that surround it represent an intolerable problem”(Bulkeley and Newell, 2009*).*“Initially, climate change was approached as a global issue, and climate governance sought to address it on the international stage. This took the form of Multilateral Environmental Agreements (MEAs), beginning with the United Nation Framework Convention on Climate Change (UNFCCC) in 1992. With the exception of the Kyoto Protocol, international agreements between nations had been largely ineffective in achieving legally binding emissions cuts”. *Andonova et al., (2009).*“With the end of the Kyoto Protocol's first commitment period in 2012, between 2013 and 2015 there was no legally binding global climate regime. This inertia on the international political stage contributed to alternative political narratives that called for more flexible, cost effective and participatory approaches to addressing the multifarious problems of climate change”. *Bäckstrand et al., (2007).“*These narratives relate to the increasing diversity of methods that are being developed and deployed across the field of climate governance”. Farah (2015).

In 2015, the Paris Agreement was signed, which is a legally binding international treaty on climate change. Its goal is to limit global warming to "well below 2", and preferably 1.5 degrees Celsius above preindustrial levels, and to achieve this goal, countries agree to peak greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. *UNFCCC (2022)* commits “all nations of the world to achieving a "balance between anthropogenic emissions by sources and removals of greenhouse gases in the second half of this century”. “The Paris Agreement marked a new era for global energy and climate policies. Under its framework, each country submits its own National Determine Contribution (NDC) based on its particular situation. Though the Paris Agreement is legally binding, as an extension to the UNFCCC, the NDCs are not legally binding. This was because a legally binding treaty would have required ratification by the United State Senate which was not supportive”. *Yergin (2020).*

The development of climate governance can be traced firstly to climate diplomacy between inter-state actors and secondly to the development of transnational networks and non-state actors. The timeline above highlights key points throughout this process. The point of creation is difficult to determine exactly, however a definitive point in its history is the 1992 United Nation Framework Convention on Climate Change (UNFCCC) in Rio. This has been termed "the first major milestone in the history of climate diplomacy". *Bulkeley, and Newell (2009).* The conference addressed nations from across the globe and sought to emulate the diplomatic success of the Montreal Protocol in phasing out ozone-depleting chemicals.

“Even though Africa contributes only 4% of global emissions, it is the most affected by the impacts of climate change” (UN 2006). “And in response to this, the African Union (AU), through Goal 7, seeks to realizeenvironmentally sustainable and climate-resilient economies and communities in the continent. In particular, the AU has called for a climate governance design that promotes local strategies. These should be based ongrassroots knowledge, legislation to promote sustainability practices, prioritize grassroots approaches, and fast-tracking the promotion of grassroots environmental practices through established regional economiccommunity (REC) protocols on trans-boundary and shared resources”(AGR 2021). The United Nations’ SDG 13 further buttresses thiscontinental policy agenda, showcasing the global growing policy concernswith climate change and efforts to address African climate governancedeficits.

This study focuses on climate change governance in the Congo Basin taking into considerations the case of Cameroon and the DRC, being among the most vulnerable countries to climate change in the sub-region due to its fragile ecosystem. The research maps out the general climate governance policy legal systems at theregional, national, and local levels. Most countries in this region are prone to extreme climatic conditions such as flooding in their coastal lowlands while droughts are prevalent in the Northern lowlands of the counties. This research will therefore develop a conceptual framework that can serve as an analysis to climate change governance within and beyond international and national regimes. In this regard, the research will make use of the theoretical approach and the neo-Gramscian approach and the governmentality perspective. The research brings insight from these two perspectives in order to generate alternative and deeper understanding of the different states, character of power and authority in the international arena. This will enable the research to get understanding of non-state actors in global and local climate change governance and how this will collaborate with state governance to impact the governance in climate change implementation and adaptation strategies.

“While there is a relative lack of policy commitment to climate change bymost subnational governments or regional authorities in Africa because of several socio-political and economic challenges, the impacts are causinguntold destruction in sub-Saharan Africa (SSA). There are challenges pointing to governance deficits common to these countries’ levels of political development, mainly underpinned by their state- and nation-building status. Regardless,African states are pressured to prioritize leveraging climate change adaptation strategies effectively. These connote actions to help communities andecosystems cope with changing climate conditions, that is, by reducing theadverse consequences of climate change and harnessing any beneficialopportunities” (Shi *et al*. 2016). “TheUNEP Africa’s Adaptation Gap report projected investments in Africa ofapproximately US $7–15 billion per year by 2020, US $35 billion by 2050if global warming was limited to 2 °C” (UNEP 2021).“Current inflows tosupport adaptation are approximately US $1–2 billion; hence, significanteffort is required to close the funding gap. But, in so doing, there is a need for $350millionto pursue a fit-to-context over a one-size-fits-all approach while dealing with African states on matters of climate change adaptation. This willensure transparency, effective stakeholder and expert engagements,bureaucratic accountability, politico-administrative relations and coordination, especially between the local and national governments” (Njuguna*et al*. 2022).

There is however rising interest In Sub-Saharan Africa (SSA) to mitigate and adapt climate change solutions. While such efforts exist, knowledge of the governance arrangements exist in very fragmented forms. Specifically, knowledge of how global climate changes processes is reflected in national policies

remain relatively less studied. So too arethere limited evidence on how national policies play out at local level. Such knowledge deficits stall scientific evidence building and policy orientation to strengthen climate adaptation practices in countries of SSA, with Cameroon and DRC being classical examples. Yet theory building on climate change governance requires such context specific evidence. In addition, for a comprehensive policy to be adopted and made effective, climate change actions require such scientific evidence. This therefore validates the need to analyze how such global processes are framed into national policy and policy instruments for climate mitigation and adaptation, and to establish the connections and disconnections between what is framed at national level and what applies at local level in terms of climate change policy instrument and what explains such variations.

The development of adaptation policies and strategies in Cameroon and the DRC is highly dominated by state actors with little or no role played by civil society organizations and local communities in the formulation of national climate change adaptation policies and strategies. This situation has undermined international principles of equality, and stakeholder participation, accountability and transparency in climate change actions. The interest and needs of all stakeholders are not adequately reflected in adaptation response. There is therefore no participatory, assessment and development of adaptation response in these countries. Positioning of climate change adaptation within the environment sector limits effective integration. A review of the environment and development policy frameworks reveals a tendency to place climate change adaptation solely with the environment sector with no reference to other sectoral plans. This has been found to limit public and decision makers' understanding of climate change impacts and the implications for national economies, and thus undermines political buy-in for prioritization and resource mobilization for climate change adaptation. Often guidelines for mainstreaming climate change adaptation into national level planning are not availed to economic planners. Addressing the impacts of climate change and planning for adaptation is therefore done ex post facto and in an ad hoc manner.

The structural organization of civic engagement in climate change adaptation and mitigation is weak in Cameroon and the DRC especially for Non-Governmental Organization and Community Based Organization participation. This has been caused by financial, human resource and political constraints which has given more grounds to International NGOs to determine and dominate climate change adaptation agendas at the national level in Cameroon and the DRC and the implementation of these adaptations is externally driven and reflects desperate interest. The activities led by NGOs in such cases have resulted in intangible outcomes and a lack of oversight at the national level. This has brought very few concrete adaptations activities being observed at local level with a network of NGOs actively involved in climate change adaptation. This has caused insignificant exchange in idea, experiences and lesson learned. Again, state institutions have been faced with key challenges which undermine their adaptive capacities. Some of which are weak coordination due to conflicting and overlapping mandates and dysfunctional arrangements for an inter-agency integration and inadequate financing for adaptation. Cameroon and the DRC have challenges attracting and retaining skilled human resources that will enhance decentralization of adaptation responses in order to strengthen and empower local institutions capacity for adaptation. There is inadequate investment in strategic areas for climate change adaptation. Most actors are involved in climate change awareness-raising, capacity building and research with fewer investments in legislative aspects, coordination, advocacy and financial cooperation.

Despite global calls for gender mainstreaming in climate change actions, there are still lapses in mainstreaming gender into key adaptation response frameworks in Cameroon and the DRC. The national adaptation strategy of these countries fails to adequately address the aspects of inequality and gender into climate change actions. Adaptation strategies for most of the vulnerable sectors as agriculture, water and biodiversity presents major gaps in making provisions for a gender related differential impact of climate change. Enabling provision that include the security of tenure and the provision of technical information such as metrological and weather forecast and access to micro-financing with an opportunity for productive employment are not appropriately and adequately extended to women.

Study Area

Geographically, Cameroon and the Democratic Republic of Congo (DRC) are situated in Central Africa, within the Congo Basin region. The Congo Basin is characterized by its vast tropical rainforests, which are among the largest in the world. These rainforests are home to a diverse array of wildlife and plant species and play a crucial role in regulating the global climate system. Cameroon, with latitudinal coordinates ranging from approximately 2° to 13°N and longitudinal coordinates from about 8° to 17°E, boasts diverse landscapes, including rainforests, savannas, and coastal plains. The country is bordered by Nigeria to the west, Chad to the northeast, the Central African Republic to the east, and Equatorial Guinea, Gabon, and the Republic of the Congo to the south. Cameroon's economy is varied, with sectors such as agriculture, forestry, mining, and oil contributing significantly to its GDP.

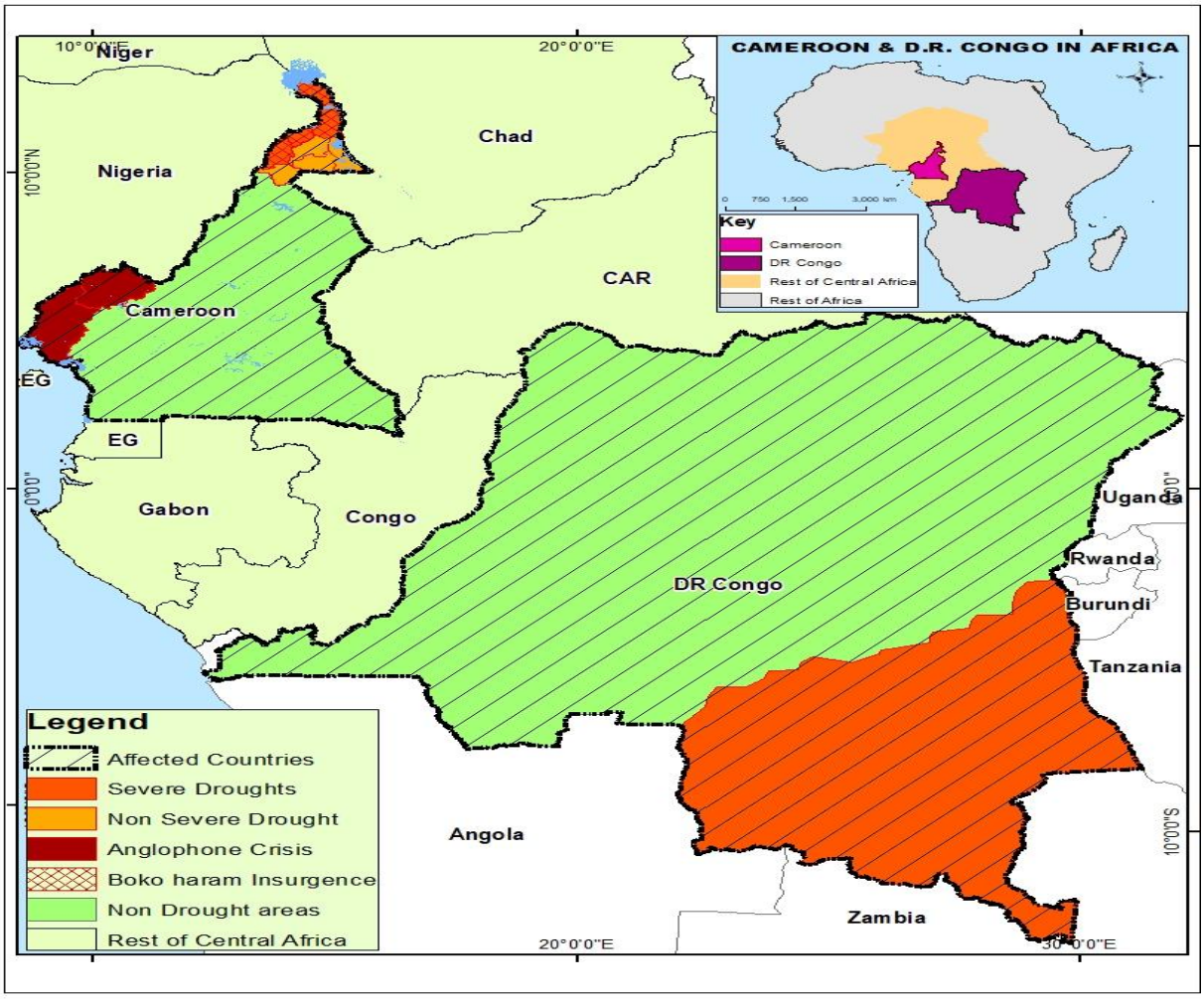

Figure 1: Location of Cameroon and the DRC in the Central African Sub-region

Methodology

This research employed a mixed method approach, which employed GIS, content analysis, in-depth-interviews, andbasic statistics. The GIS tool was used to analyze the spatial variation in the implementation of climate change adaptation in Cameroon and the DRC. The reason for this premise was that the persistence of conflicts and political arena in these countries has impacted governance and the spatial implementation of climate change adaptation strategies within the countries differentially at national and local levels. This research therefore demonstrates through GIS data manipulation how local implementation of climate change adaptation is being influenced by prevailing conflicts and political situation of the countries under observations. More information about national and local action plans such as target goals for the implementation of climate change adaptation such as strategies and progress were contained in the national policy documents of these countries as well as press reports and websites. Therefore, content analysis was vital to this research. Climate change adaptation is a continuous process hence content analysis affords the ability to examine such efforts over time. In the course of evaluating climate action plans, document analysis pulls out how they have coped over time regarding the set goals

put in place. Again, the content analysis gave meaningful insights to the various texts which brought out hidden motivations embedded within the text. This revealed information that couldhave otherwise not been uncovered using different methods such as interviews only.

Another significant part of the research was in-depth interviews and focus group discussions with climate change actors and stakeholders in the two countries who were selected for in-depth interviews and focus group discussions. The objective of the in-depth interviews and focus group discussions was to gain full insights into the unique intricacies of the various national and local climate change adaptation efforts and success in the implementation of these adaptations as well as generate reliable, qualitative data for the research. Hence a semi-structured interview guide was used to obtain these insights, with open ended questions that prevent digression while generating conversational responses. This approach allows climate change actorsto express their unique and individual experiences in the national, local, spatial and temporal conditions which has either enabled them or hamper the implementation of their climate change adaptation strategies within the different countries. A detail examination of the international, national and local documents for the countries under observation guided the development of the relevant and meaningful semi-structured interview questions for this research.

Data Collection

Each of the country under study was divided into four quadrants; that is, the North, South, East, and West which correspond to the four different ecological zones with different environmental and socio-economic conditions and different characteristics. Within this same ecological zone, the impact of climate change is not the same, so this enabled the study to collect data from the quadrants and analyze to correlate how governance has affected the implementation of climate change adaptation differently within the same country and to understand how the different ecological zones of the countries are adapting to climate change either using national or indigenous adaptation methods. GIS was used to delimit the different ecological zones and to map out the trends and patterns of climate change and rates to which they are adapting to climate change. The importance of documentary data sources for this research such as climate change policies, feasibility study reports, webpages and progress reports cannot be over emphasized. This is because one of the most important parts of this research was to evaluate the level of success in the implementation of climate adaptation strategies. In order to arrive at the set objective of the study, there was need to examine the actions toward climate change adaptation. For a consensus to be arrive at, this research started by examining the various policy documents for all climate change adaptation strategies in Cameroon and the DRC, which focused on their set targets toward climate change adaptation, time line set to achieve the targets and the various sectors of the economy targeted as the areas of action. With this, finding the policy documents from the different websites and offices was one of the criteria to know which documents are available and where they are available.

In the 8 ecological zones under study, 3 focus group discussions wereheld with women and men who resided in these communities. One of the discussions was exclusively with men and another with women whereas the third was with women and men. This was to identify the level to which gender is mainstreamed into climate change governance in the study countries. Each focus group was made up of between 15 to 20 participants drawn from different corners of the communities made up of different socio-economic and political classes.

In-depth interviews of key informants working on climate change adaptation and mitigation in Cameroon and the DRC such as the coordinators of national climate change initiative programs and national climate action plan of the republic of Cameroon and Congo interviewed. An interview guide was used to conduct interviews and collect appropriate information. Participants selected as key informants were among others those that have great insights by virtue of their status, function and duties with respect to climate change governance and the policies governing adaptation. Also, farmers who have been carrying out agriculture for two to three decades in the different ecological zones were interviewed to understand the changes over time and how this has affected their output. The study focused on staff from; the ministry environment, forestry and wildlife, agriculture and rural development, NGOs, metrological staff and national institutes of statistics.

Results and Discussion

Dominant Role of Governance in Shaping Climate Change Adaptation Implementation:

In Cameroon, governance structures play a significant role in shaping climate change adaptation efforts. The country faces challenges related to bureaucratic accountability and transparency in decision-making processes. The government's centralized approach hampers effective coordination between national and local levels, resulting in disjointed adaptation strategies. Local communities feel marginalized in decision-making processes, leading to a lack of trust in government initiatives. Additionally, Cameroon's diverse geographic and socio-economic landscapes require tailored adaptation strategies that address the specific needs of different regions. In the DRC, governance structures also influence climate change adaptation implementation. However, the country's political instability and weak institutional capacity pose significant challenges. Bureaucratic accountability and transparency remain elusive, hindering effective coordination between government agencies and ministries responsible for adaptation. Moreover, conflict and political dynamics exacerbate spatial disparities in adaptation efforts, with regions facing instability experiencing additional barriers to implementation. Strengthening governance mechanisms and enhancing coordination between national and local levels are critical to addressing these challenges. In both Cameroon and the DRC, governance structures play a significant role in shaping climate change adaptation efforts. However, while Cameroon faces challenges related to bureaucratic accountability and transparency in decision-making processes, the DRC grapples with political instability and weak institutional capacity. The centralized approach in Cameroon hampers effective coordination between national and local levels, whereas conflict and political dynamics exacerbate spatial disparities in adaptation efforts in the DRC. Strengthening governance mechanisms and enhancing coordination between national and local levels are critical needs in both countries to address these challenges effectively.

Challenges in Implementing Climate Change Adaptation Strategies

Respondents highlighted several challenges, echoing previous studies by Alemagi*et al.* (2014), Fünfgeld (2010), Thomas *et al.* (2010), Smith and Olesen (2010), and Biesbroek*et al.* (2011). These challenges encompass structural, educational, and institutional barriers, alongside administrative and governance issues. They include inadequate coordination, limited sensitization and capacity building efforts, ineffective implementation strategies, insufficient compliance measures, lack of transparency, and inadequate public participation in both countries were some of the key challenges faced by the governments. Moreover, issues such as the ambiguity of legal frameworks, conflicting timescales,

fragmentation of efforts, low awareness levels, communication gaps, corruption, and a lack of motivation hinder the adoption of integrated approaches to climate changein Cameroon and the DRC. Addressing these challenges requires the development of effective community awareness and enforcement programs, leveraging mass media for clear communication, and fostering stakeholder involvement in decision-making processes across all phases of mitigation and adaptation projects. This multifaceted approach is essential for overcoming the complex obstacles to climate action and fostering sustainable change.Weak coordination among state actors and limited civic engagement are prominent challenges in Cameroon's adaptation landscape. Government agencies and ministries responsible for climate change adaptation such as the Ministry of Environment, Protection of Nature and Sustainable Development operate in silos, leading to inefficiencies and overlaps in adaptation initiatives. The lack of meaningful engagement with civil society organizations and local communities further hampers the inclusivity and effectiveness of adaptation strategies. Tailored approaches that incorporate local knowledge and community input are essential to address these challenges. Similar to Cameroon, the DRC faces challenges related to weak coordination and limited civic engagement in climate change adaptation efforts. Inefficient coordination among state actors results in fragmented adaptation initiatives that do not effectively address the diverse challenges posed by climate change. Moreover, the country's political instability exacerbates these challenges, with conflict-affected regions facing additional barriers to implementation. Strengthening civic engagement and enhancing coordination between government agencies and local communities are critical for overcoming these obstacles. Weak coordination among state actors and limited civic engagement are prominent challenges in both Cameroon and the DRC. However, while Cameroon struggles with inefficient coordination among government agencies and ministries, the DRC faces obstacles related to weak coordination and limited civic engagement exacerbated by political instability. Both countries require tailored approaches that incorporate local knowledge and community input to address these challenges effectively.

Spatial Variation in Climate Change Adaptation Implementation

Cameroon exhibits significant spatial disparities in adaptation implementation due to its diverse geographic and climatic conditions. Regions with distinct environmental features, such as coastal areas, Western highlands, and rainforests, face unique adaptation challenges. Additionally, conflict-affected regions are experiencing additional barriers to effective adaptation due to political instability and resource conflicts. In regions such as the North West, South West, and the Northern Lowlands of Cameroon, ongoing sociopolitical crises and the impacts of climate change have significantly disrupted intervention efforts. These crises have brought about a state of instability, hindering the implementation of crucial climate change initiatives and advocacy endeavors. The combined surface area affected by these challenges amounts to approximately 19,334.82 square kilometers in the North West and South West regions and 42,352 square kilometers in the Northern Lowlands region. Consequently, human settlements have been disrupted, and the ability to effectively advocate for environmental sustainability and climate resilience has been severely curtailed. The overlapping crises exacerbate vulnerabilities and underscore the urgent need for targeted interventions to address both sociopolitical tensions and climate-related challenges in these regions.Tailored adaptation strategies that account for these spatial variations are essential to ensure the resilience of local communities. Spatial disparities in adaptation implementation are prevalent in the DRC, driven by the country's diverse geography and socio-economic conditions.Geographic features such as rivers, forests, and mountains influence the distribution and effectiveness of adaptation measures. Conflict-affected regions, particularly in the eastern part of the

country, face heightened vulnerability to climate change impacts. Addressing spatial disparities requires context-specific adaptation strategies that consider the unique challenges faced by different regions. Both Cameroon and the DRC exhibit significant spatial disparities in adaptation implementation due to their diverse geographic and socio-economic conditions. While Cameroon's adaptation strategies need to account for distinct environmental features and conflict-affected regions, the DRC faces challenges related to diverse geography and heightened vulnerability in conflict-affected areas. Tailored adaptation strategies that consider the unique challenges faced by different regions are essential in both countries to ensure the resilience of local communities.

Role of National Policies and Governance Arrangements

In the Central African Sub-region, the issue of climate change is gradually gaining recognition as a priority. However, governments in the region primarily emphasize mitigation efforts in line with their existing laws, policies, and strategies. This focus is evident in their submission of Nationally Determined Contributions (NDCs) and the development of national REDD+ strategies, initiated following the validation of the REDD+ Readiness Preparation Proposal (R-PP) in 2012. While governments are also in the process of preparing their initial National Adaptation Programme of Action (NAPA), there remains a notable absence of a formal institutional framework for climate change adaptation in Cameroon and the DRC. Despite recognizing the potential impacts of climate change across various sectors, both countries currently lack dedicated programs specifically addressing climate change adaptation, as revealed by recent studies (Davies, 2011; Chia *et al.,* 2016).In Cameroon, the translation of national climate change policies into actionable measures at the local level remains a significant challenge. Limited coordination between national and local governments impedes effective implementation, leading to a gap between policy formulation and on-the-ground action. Strengthening linkages between national policies and local action plans is essential to ensure coherence and alignment across governance levels. Similarly, in the DRC, the translation of national climate change policies into actionable measures faces obstacles related to weak coordination and institutional capacity. Limited capacity at the local level hampers the effective implementation of adaptation policies and programs. Strengthening capacity-building efforts and empowering local authorities are crucial steps to bridge the gap between national policies and local action plans. In both Cameroon and the DRC, the translation of national climate change policies into actionable measures at the local level remains a significant challenge. While Cameroon struggles with limited coordination between national and local governments, the DRC faces obstacles related to weak coordination and institutional capacity exacerbated by political instability. Strengthening linkages between national policies and local action plans and empowering local authorities are critical steps needed in both countries to bridge the gap between policy formulation and implementation.

Influence of Stakeholders Engagement and Participation

Meaningful stakeholder engagement and participation are critical for shaping inclusive and contextually relevant adaptation efforts in Cameroon. However, the dominance of state actors in decision-making processes often marginalizes other stakeholders, limiting the diversity of perspectives considered in adaptation planning and implementation. Efforts to enhance stakeholder engagement must prioritize inclusivity, transparency, and accountability to ensure that adaptation strategies reflect the needs and priorities of all stakeholders. In the DRC, meaningful stakeholder engagement is essential for shaping inclusive adaptation strategies. However, the dominance of state actors and limited civic engagement pose

challenges to effective stakeholder participation. Strengthening mechanisms for inclusive decision-making and enhancing transparency and accountability are critical for ensuring that adaptation efforts reflect the diverse perspectives and priorities of all stakeholders. Meaningful stakeholder engagement and participation are critical for shaping inclusive adaptation strategies in both Cameroon and the DRC. However, while Cameroon faces challenges related to the dominance of state actors in decision-making processes, the DRC struggles with limited civic engagement and inclusive decision-making exacerbated by political instability. Both countries require efforts to enhance stakeholder engagement prioritizing inclusivity, transparency, and accountability to ensure that adaptation strategies reflect the needs and priorities of all stakeholders.

Conclusion

In conclusion, the study sheds light on the intricate challenges and opportunities inherent in addressing climate change impacts in the region. The research underscores the pivotal role of governance structures and processes in shaping climate change adaptation efforts, highlighting both commonalities and disparities between the two countries. Throughout the study, it became evident that governance deficits, bureaucratic accountability issues, and limited civic engagement pose significant challenges to effective climate change adaptation implementation in Cameroon and the DRC. These challenges are compounded by political instability, weak institutional capacity, and spatial disparities, further exacerbating the vulnerabilities of local communities to climate change impacts. Moreover, the study underscores the importance of stakeholder engagement and participation in shaping inclusive and contextually relevant adaptation strategies. While efforts to enhance stakeholder engagement are underway, the dominance of state actors and limited civic engagement continue to hinder effective stakeholder participation, particularly in decision-making processes.

The research also highlights the need for tailored, context-specific adaptation strategies that incorporate local knowledge, community input, and grassroots approaches. By acknowledging the diverse socio-economic and environmental landscapes within Cameroon and the DRC, policymakers can develop more resilient and sustainable adaptation measures that address the unique needs and challenges of different regions. Furthermore, the study emphasizes the importance of bridging the gap between national policies and local action plans, strengthening coordination mechanisms, and empowering local authorities to enhance the effectiveness of climate change adaptation efforts. By promoting transparency, accountability, and coordination at both national and local levels, policymakers can foster greater coherence and alignment across governance levels, ultimately enhancing the resilience of communities and ecosystems to climate change impacts. In essence, the study underscores the urgent need for comprehensive, context-specific strategies that prioritize stakeholder engagement, transparency, and collaboration to address the complex challenges posed by climate change in Cameroon and the DRC. By embracing inclusive and participatory approaches to climate change governance, policymakers can foster more resilient and sustainable economies and communities, paving the way for a brighter and more resilient future in the Congo Basin and beyond.

Recommendations for Policy and Practice

Addressing governance challenges and promoting inclusive, participatory approaches to adaptation are essential for building resilience in Cameroon. Policy recommendations include improving governance structures and processes to prioritize stakeholder participation, accountability, and coordination.

Mainstreaming gender considerations into adaptation frameworks is crucial to address gender disparities and ensure equitable and socially inclusive adaptation strategies. Similarly, in the DRC, addressing governance challenges and promoting inclusive, participatory approaches to adaptation are paramount. Policy recommendations include strengthening governance mechanisms, enhancing coordination between national and local levels, and fostering collaboration between stakeholders. Mainstreaming gender considerations and addressing financial constraints are essential steps toward enhancing the effectiveness and sustainability of adaptation efforts in the DRC. Addressing governance challenges and promoting inclusive, participatory approaches to adaptation are paramount for building resilience in both Cameroon and the DRC. While policy recommendations include improving governance structures and processes, mainstreaming gender considerations, and addressing financial constraints in both countries, specific strategies need to be tailored to address the unique challenges faced by each country. Strengthening governance mechanisms, enhancing coordination, and fostering collaboration between stakeholders are essential steps needed to enhance the effectiveness and sustainability of adaptation efforts in both Cameroon and the DRC. addressing governance challenges and promoting inclusive, participatory approaches to climate change adaptation is paramount for building resilience and effectively responding to the impacts of climate change in both Cameroon and the Democratic Republic of Congo. These findings underscore the need for comprehensive, context-specific strategies that prioritize stakeholder engagement, transparency, and collaboration to address the complex challenges posed by climate change in each country.

References

AGR. 2021. The Africa Governance Report 2021: Africa's governance Futures for the Africa We Want. Addis Ababa: African Governance Architecture, Africa Union.

Alemagi, D., Minang, P.A., Feudjio, M. and Duguma, L.A. (2014),"REDDþ readiness process in Cameroon: an analysis of multi-stakeholder perspectives", Climate Policy, Vol. 14 No. 6, pp. 709-733, doi: 10.1080/14693062.2014.905439.

Andonova, L. B., Betsill, M. M. & Bulkeley, H (2009). "Transnational climate governance". Global Environmental Politics. **9** (2): 52–73. doi:10.1162/glep.2009.9.2.52. S2CID 57565967.

Bäckstrand, K.; Lövbrand, E.; Pettenger, M. E. (2007). Climate governance beyond 2012: Competing discourses of green governmentality, ecological modernization and civic

Bernstein, S., Betsill, M., Hoffmann, M. & Paterson, M. (2010). "A tale of two Copenhagens: Carbon markets and climate governance". Millennium-Journal of International Studies. **39** (1): 161–173. doi:10.1177/0305829810372480. S2CID 144401144.

Biesbroek, G.R., Termeer, C.J., Klostermann, J.E.M. and Kabat, P. (2011), "Barriers to climate change adaptation in The Netherlands", Climate Law, Vol. 2, pp. 181-199

Bulkeley, H. (2010). "Climate Policy and Governance: an editorial essay". Wiley Interdisciplinary Reviews: Climate Change. **1** (3): 311–313. doi:10.1002/wcc.1. S2CID 129109192.

Bulkeley, H.; Newell, P. (2009). Governing climate change. New York: Routledge. p. 22.

Chia, E., Fobissie, K. and Kanninen, M. (2016), "Exploring opportunities for promoting synergies between climate change adaptation and mitigation in Forest carbon initiatives", Forests, Vol. 7 No. 12, doi: 10.3390/f7010024.

Chia, E.L., Somorin, O.A., Sonwa, D.J., Bele, M.Y. and Tiani, M.A. (2015), "Forest–climate nexus: linking adaptation and mitigation in Cameroon's climate policy process", Climate and Development, Vol. 7 No. 1, pp. 85-96, doi: 10.1080/17565529.2014.918867.

Davies, G.N. (2011), Climate Change Financing and Aid Effectiveness, Cameroon Case Study Report, African Development Bank.

Farah, Paolo Davide, Global Energy Governance, International Environmental Law and Regional Dimension (November 30, 2015). Paolo Davide FARAH &Piercarlo ROSSI,

Fünfgeld, H. (2010), "Institutional challenges to climate risk management in cities", Current Opinion in Environmental Sustainability, Vol. 2 No. 3, pp. 156-160, doi: 10.1016/j. cosust.2010.07.001.

ICLEI 'Local Governments for Sustainability'. "AboutICLEI". Archived from the original on 2009-08-13. Retrieved 15 May 2011.

Jagers, S.C.; Stripple, J. (2003). "Climate Governance beyond the State". Global Governance. **9** (3): 385–400. doi:10.1163/19426720-00903009.

Masego Madzwamuse (2011). Climate Governance in Africa - Adaptation Strategies and Institutions

Njuguna, L., B. Robbert, A.C. Todd, T. Peter, and D. Art. (2022). Designing Fit- for- Context Climate Change Adaptation Tracking: Towards a Framework for Analysing the Institutional Structures of Knowledge Production and Use. Climate Risk Management: 100401.

Shi, L., E. Chu, I. Anguelovski, A. Aylett, J. Debats, K. Goh, T. Schenk, K.C. Seto, D. Dodman, D. Roberts, and J.T. Roberts.(2016). Roadmap Towards Justice in Urban Climate Adaptation Research. Nature Climate Change 6 (2): 131–137.

Smith, P. and Olesen, J.E. (2010), "Synergies between the mitigation of and adaptation to, climate change in agriculture", The Journal of Agricultural Science, Vol. 148 No. 5, pp. 543-552, doi: http://dx.doi.org/10.1017/S0021859610000341

The Paris Agreement. UNFCCC. (2015). Retrieved 2022-08-03.

The Paris Agreement. UNFCCC. Retrieved 2022-03-28.

Thomas, S., Dargusch, P., Harrison, S. and Herbohn, J. (2010), "Why are there so few afforestation and deforestation clean development mechanism projects?", Land Use Policy, Vol. 27 No. 3, pp. 880-887, doi: 10.1016/j.landusepol.2009.12.002

UN. 2006. United Nations Fact Sheet on Climate Change 2006, United Nations Climate Change Conference, Nairobi. Date accessed: 2/11/2021. https:// unfccc.int/files/press/backgrounders/application/pdf/factsheet_africa.pdf.

UNEP. 2021. Adaptation Gap Report 2021. Date accessed: 2/11/2021. https:// www.unep.org/resources/adaptation- gap- report- 2021.

Yergin, Daniel (2020). The New Map. New York: Penguin Press. pp. Chapter 41. ISBN 9780698191051.

"Video #2 of 4: The Pillars of Climate Governance - Paris Knowledge Bridge: Unpacking International Climate Governance". enb.iisd.org. Retrieved 2022-10-20