Journal of Contemporary Governance and Public Policy, 5 (1) April 2024, 33-54
ISSN: 2722-3981 (Print), ISSN: 2722-3973 (Online)
Available Online at https://journal.ppishk.org/index.php/jcgpp

JOURNAL OF CONTEMPORARY GOVERNANCE AND PUBLIC POLICY

Decentralising Climate Governance in the Global South: Lessons from Itezhi-Tezhi and the Kafue Wetlands, Zambia

Biggie Joe Ndambwa[1]*, Given Moonga[2]

[1] Department of Government and Management Studies, University of Zambia, Zambia

[2] Center for International Health, Ludwig Maximilian University of Munich, Germany

*Corresponding Author Email: joe.ndambwa@unza.zm

Received: 31 May 2023; Revised: 31 December 2023; Accepted: 1 January 2024

Abstract

This article discusses the challenges of decentralising climate governance in the Global South in the context of intensifying climate change. Using qualitative methods of data collection and analysis, we interviewed a total of 112 participants who participated in the study, including traditional leaders, ward councillors, subject-matter experts, government officials and members of the public who took part in focus group discussions. Our results show that devolution, delegation, deconcentration and privatisation have been used as strategies for decentralising climate action in the Itezhi-Tezhi District. However, these methods of decentralisation are affected by several factors, including unclear rules for elected and appointed leaders, which influence the devolution of decision-making responsibilities at the local government level. Regarding delegation, decentralising climate governance is affected by inadequate public participation, particularly in the design and execution of climate initiatives in the Kafue wetlands. Furthermore, this article shows that deconcentration is likely to affect climate governance because the national government has not deconcentrated the units for climate governance from the line ministry to the local authority. Privatisation, which has been an effective way of decentralising climate governance in the Kafue wetlands, has also been problematic due to inadequate community participation. These challenges and opportunities serve as lessons for building resilience in effective decentralised climate governance in the Kafue wetlands. This article adds to the ongoing discourse on the efficacy of decentralising climate governance in the Global South and offers valuable insights for future research in this genre of academic inquiry in Sub-Saharan Africa.

Keywords: *Climate Governance; Decentralisation; Global South; Local Government*

Copyright © 2024 by Authors, Published by Pusat Penelitian Ilmu Sosial dan Humaniora Kontemporer, Indonesia. This is an open access article under the CC BY-SA License (https://creativecommons.org/licenses/by-sa/4.0).

How to Cite: Ndambwa, B. J., & Moonga, G. (2024). Decentralising Climate Governance in the Global South: Lessons from Itezhi-Tezhi and the Kafue Wetlands, Zambia. *Journal of Contemporary Governance and Public Policy, 5*(1), 33-54. https://doi.org/10.46507/jcgpp.v5i1.190

Permalink/DOI: https://doi.org/10.46507/jcgpp.v5i1.190

Introduction

In view of growing environmental changes resulting from climate change and other human activities in many parts of the world, the responsibility to manage the devastating effects is now bestowed not only on international organisations and national governments but also on the shoulders of local authorities (Lervik & Sutherland, 2017). For this reason, many scholars acknowledge the importance of decentralising climate governance to adopt local climate action and practical measures that can lead to effective management of climate issues at subnational levels. As part of climate governance, the international community has thus far been fast-tracking local governments into climate governance (Beeri & Zaidan, 2023; Olthof, 2021). The recognition of decentralised climate governance by international organisations signifies the critical role that subnational institutions can play in managing climate change.

In the Global North, decentralised climate governance has become a critical avenue for managing climate change in European and North American countries. Studies have indicated that European countries have increasingly pushed more responsibility to manage climate change issues onto local authorities (Collier, 1997; Gasco-Hernandez et al., 2022; Osman, 2021; Shabb & McCormick, 2023). For instance, Germany, Sweden, the United Kingdom and France, have all delegated climate change governance to local authorities, albeit with varying degrees of decentralisation (Almeida et al., 2023; Yalçın & Lefèvre, 2012). In North America, Canada, the United States of America and Mexico have also given the responsibility to manage climate change to local authorities. These initiatives have had varying degrees of success. The local authorities have implemented comprehensive climate action aligned with national and international commitments such as setting up emissions reduction targets (Wang, 2024; Park, 2019; Wu & Shi, 2018). However, these ventures in the Global North have faced a variety of challenges with varying degrees of success.

The discourse on decentralised climate governance in the Global South in general and Africa in particular has gained momentum over the past few decades. As part of its first climate strategy, the African Union encouraged member states to decentralise climate governance to local governments (Muesiri & Ojong, 2018; Sidik, 2022; Sakapaji, 2021; Sienkiewicz-Małyjurek, 2022). However, like many regions in the Global South, the need to decentralise climate governance in Africa is likely to be affected by several factors. Achieving the environmental and climate targets of the African Union's Agenda 2063, which includes decentralising climate action to local governments, will require surmounting numerous obstacles (Chikulo, 2010; de Loma Osorio, 2016). For countries in Sub-Saharan Africa, decentralising climate governance is crucial but comes with its own challenges, particularly for developing countries (Napoli, 2013).

The number of empirical studies on climate change in Zambia has risen in the past decade. While empirical literature has reviewed the impact of climate change (Banda et al., 2022; De Groote et al., 2023; Omala, 2023; Funder & Mweemba, 2019; Makondo et al., 2014), a lack of research has focused on local institutions and their capacity to manage complex issues such as climate change at the grassroots level. Although studies have

appeared on decentralisation and climate governance in Zambia, the specific obstacles and opportunities for decentralising climate governance have received little attention. In addition, while existing studies have made enormous strides in exploring the challenges facing local authorities in managing climate change, a notable research gap is evident in understanding the dynamics of decentralising climate governance in the Global South. The majority of studies in this discourse have tended to focus on Global North countries, while others have focused on global and national frameworks for climate governance.

Therefore, a critical research gap remains regarding specific challenges, opportunities and best practices for decentralising climate governance in special areas such as the Kafue wetlands of Itezhi-Tezhi District in Zambia, which is a 6,500-square-kilometre floodplain along the Kafue River. About 1.3 million Zambians from several ethnic groups live in the greater watershed and about 300,000 of them directly rely on the Kafue wetlands for their social and economic livelihood. While the Kafue wetlands extend into several other districts, the scope of this paper has been narrowed to Itezhi-Tezhi.

A gap in the literature has become more prominent considering the growing significance of subnational units in the implementation of climate policies and initiatives. This research gap hinders targeted and evidence-based initiatives for decentralised climate governance at the local level. While broad policy responses are important, a deeper exploration of decentralised climate governance in local authorities located in wetlands is needed to ensure an effective and localised climate response at the community level. Moreover, existing studies have tended to underplay the significance of local stakeholders in decentralised climate government in special wetlands of the Itezhi-Tezhi District. A few studies that underscore the significance of decentralising climate governance only concentrate on one aspect, such as the role of the local authority in mainstreaming climate change policy at subnational levels (Banda et al., 2022).

Decentralising climate governance has become a critical avenue for formulating and implementing climate initiatives at the subnational level. This effort aligns with the Constitution of Zambia (Amendment) Act No. 2 of 2016, which stipulates that the country should implement a decentralised system of government comprised of a local authority for each district, which is represented by an elected district council and its secretariat headed by a town clerk or council secretary. However, while the Constitution of Zambia establishes a context for a decentralised system of government, matters of decentralising climate governance have not been the major preoccupation of successive governments. Thus, empirical studies are needed that delve into the unique context of decentralising climate governance in the Kafue wetlands of Itezhi-Tezhi, providing insights that inform targeted interventions to foster resilient climate governance systems at the subnational level.

The rationale for decentralising climate governance stems from the larger idea of transferring administrative functions from the central government to local authorities through a process of decentralisation (Ellul, 2021). This process involves the distribution or devolution, delegation, deconcentration and to some extent the privatisation of

decision-making powers and responsibilities related to climate governance from the central government to institutions at the subnational level, as shown in Table 1.

Table 1. Decentralisation Strategies and Institutional Mechanisms
Source: Steiner (2005)

Decentralisation Strategy	Types of Powers Decentralised	Recipient Institutions
Devolution	Political, administrative and fiscal powers	Elected leaders (ward councillors, council chairpersons)
Delegation	Administrative, fiscal powers	Public corporations (parastatals) agencies
Deconcentration	Administrative powers	Government ministries (sector ministries)
Privatisation	Economic, participatory powers	Private entities (NGOs, civil society, cooperatives, farmers' unions, traditional leaders, clubs and associations, etc.)

'Devolution' as a strategy for climate governance involves the transfer of political, administrative and fiscal responsibilities of the central government to local governments (Steiner, 2005). The transfer of political power and decision-making authority to local entities is aimed at decentralising governance, allowing local councils to have more control over their affairs. 'Delegation' means that the authority to manage climate-related projects at the subnational level becomes the responsibility of agencies and state-owned enterprises. In delegated climate governance, authority and decision-making are transferred from the central government to government agencies and state-owned enterprises allowing for more localised decision-making. While Steiner (2005) makes a distinction between deconcentration and other forms of decentralisation, other scholars suggest that deconcentration is part of delegation or devolution (Ndambwa, 2020; Taylor et al., 2018). Since deconcentration involves the redistribution of tasks within the same organisation, such as ministries. Therefore, 'deconcentration' sets in motion the redistribution of structures and mechanisms that inform decision-making and actions aimed at addressing the effects of climate change at the subnational level (Borie et al., 2019). Additionally, 'privatisation' leads to more participation of major economic and social groupings at the grassroots level (Anguelovski et al., 2018; Banda et al., 2022).

It is against this background that this article discusses the challenges and opportunities of decentralising climate governance in the Kafue wetlands of the Itezhi-

Tezhi District. In particular, this study identifies opportunities and struggles for devolution, delegation, deconcentration and privatisation as mechanisms for decentralising climate governance. Moreover, insights are provided that support decentralised climate action and contribute to efforts to mitigate the impacts of climate change in the Kafue wetlands of Itezhi-Tezhi. This paper also aims to contribute to the wider discourse on decentralising climate governance in the Global South and provide valuable insights into unique problems and opportunities in Zambia and other African countries. As noted by Anguelovski et al. (2018), decentralising climate governance is a new phenomenon in natural resource governance to which this article seeks to contribute using the Kafue wetlands as a case study.

Research Methods

This work addresses the research gap outlined in the previous section and explores the challenges and opportunities of decentralising climate governance in Zambia using the Itezhi-Tezhi District as a case study. Itezhi-Tezhi is one of the 15 districts in the Southern Province of Zambia. Itezhi-Tezhi District derives its mandate from the Local Government Act (No 2 of 2019) which gives the District Council the authority to maintain law and order and effective administration of local affairs, including natural resource governance of the Kafue wetlands. The district has a total of 15 wards each represented by a ward councillor elected every five years. The political head of the district council is the council chairperson, who is elected every five years during a general election. The district administrative officer is the administrative head of the district, while the district commissioner, appointed by the President of the Republic of Zambia, is head of the district and responsible for coordinating government activities. The Itezhi-Tezhi District has five chiefdoms, namely Chikaza Munyama, Chilyabufu, Musungwa, Muwezwa and Shezongo.

The Itezhi-Tezhi District is particularly significant to this study due to its ecological sensitivity, climate change vulnerability, agricultural practices and unique local governance dynamics. The area has a diverse ecological system that includes floodplains and wetlands that are vulnerable to climate change impacts (Chansa & Kampamba, 2009). Therefore, exploring the challenges of decentralised climate governance in the Itezhi-Tezhi District is critical for developing long-term strategies that address specific wetlands vulnerabilities.

This study used a qualitative research approach to explore the perspectives, experiences and capacity of local government regarding ecological governance in the Kafue flats, with a focus on the Itezhi-Tezhi District. As seen in Table 2, the research methodology section outlines the critical components of the study, such as data collection methods, sampling strategy and data analysis techniques.

For sampling and data collection, a purposive sampling method was used to select targeted participants with relevant knowledge of local government and the state of ecological changes in the study area. The sample size of 112 participants was determined based on data saturation, wherein new information ceases to emerge from the key

informant interviews or focus groups (Creswell, 2021). In terms of categories, 12 were traditional leaders, 7 were ward councillors, one was from the office of a member of parliament, and 94 subjects participated in focus group discussions. Semi-structured questions were administered to key informants and focus group participants. The interviews and focus group discussions provided valuable insights into the challenges faced by the local government in managing ecological changes in the Kafue flats. In addition, to facilitate interactive conversations on ecological governance vis-à-vis the capacity of the local authority, focus group discussions were conducted among community members in the study area.

Table 2. Research Methods and Techniques Used in the Study
Source: Processed by Authors (2023)

Method	Description
Research design	Phenomenological approach
Sampling technique	Purposive sampling
Data collection	In-depth interviews, group discussions
Data analysis	Thematic analysis
Validity and rigour	Participant checking (verification)
Ethical considerations	Informed consent

The data collected from interviews and focus group discussions were analysed for themes (Guest et al., 2012; Onwuegbuzie et al., 2009). Themes and patterns were identified in the data to gain a more comprehensive understanding of the challenges of decentralised climate governance in Itezhi-Tezhi and the Kafue wetlands. This process involved iterative coding as well as categorisation and interpretation of the qualitative data. Ethical considerations were followed to ensure participant confidentiality was protected and informed consent was received. Participants were informed about the purpose of the study, and their voluntary participation was requested. The researcher also anonymised data references for analysis and reporting the findings of the study to maximise the confidentiality of the respondents.

Results and Discussion

This section outlines the results and discussions of key research findings. The first section explores the context of decentralising climate governance by analysing how some selected countries in the Global South have addressed the question of ecological governance using local subnational institutions or municipal governments. The second part discusses the challenges and opportunities of decentralising climate governance in the Kafue flats, focusing on the efficacy of devolution, delegation, deconcentration and

privatisation as mechanisms for decentralising climate governance. The third part of this section discusses strategies for enhancing capacity and efforts for building resilience against climate change effects in the Kafue wetlands.

Decentralising Climate Governance: A Global South Perspective

Countries in the Global South face numerous ecological governance challenges. In South Africa, for instance, the government has recognised the significance of local authorities in mitigating the effects of climate change (Leck & Simon, 2018). The implementation of the role of local authorities in the South African government's response to climate change has been abetted by the country's environmental and local government legislation and policy framework, which provides for the participation of the local government in ecological governance (Kotze & du Plessis, 2006). However, local counties in South Africa face many challenges that affect ecological governance in their respective localities, such as a lack of understanding of ecological issues and adaptation options, party politics and low interest in ecological issues in local authorities (Tshamano & Shopola, 2021).

The challenges encountered by local authorities suggest that national and provincial governments across the Global South must address common problems in mainstream climate change adaptation at the municipal level (Sharma et al., 2014). For example, Kenya and Uganda in East Africa offer insights regarding the significance of local governments in ecological governance. The 2010 constitution of Kenya introduced a major recalibration of the country's governance system, which devolved considerable governmental functions to 47 local authorities (Armstrong, 2023). In Kenya's decentralised system, the Council of County Governors plays a key role in coordinating the functioning of local authorities. Moreover, the Council provides a platform for stakeholder consultation at the local level. Nevertheless, Kenyan counties face several ecological governance challenges, including a lack of funding for ecological issues due to a substantial amount of national funds held by the central government (Park, 2012).

Uganda is often cited as the best system of devolved government in Africa (Kisambira & Songcai, 2022). However, the system has several obstacles to the effective implementation of ecological policies that cut across the policy development and implementation cycle at the municipal level. Some studies (Ampaire et al., 2017), show that Ugandan localised climate action is problematic because such policies are mainly developed by the central government while other actors, such as local communities, are not consulted. This lack of consultation creates a communication glitch between national, district and local government structures concerning ecological governance (Obonyo & Muhumuza, 2021). Local ecological governance in Uganda is also affected by limited technical capacity and finances, local and national politics and the absence of functional structures to implement ecological policies at the local level (Kisambira & Songcai, 2022).

Countries face similar challenges in West Africa. In Nigeria, for instance, local governments have financial autonomy but are severely disempowered regarding climate change governance. Moreover, the delivery of social services at the local government level has declined due to overwhelming corruption, weak institutions and a lack of

oversight. Health services in Nigeria are inadequate, and potable water is limited. In addition, primary education is in a comatose state, teachers are protesting not being paid and public infrastructure is poorly maintained. Although the situation in Nigeria is dire, it is neither hopeless nor incurable. However, a lack of transparency and accountability, political interference, missing technical capacity to address climate issues and limited financial capacity in Nigeria's local government are significant hindrances to local ecological governance (Okafor, 2012).

Based on the reports above, it appears that countries in the Global South face similar challenges when combatting climate change at the local level. As many countries in Africa and others in the Global South grapple with problems associated with climate change, local authorities will continue to be seen as key drivers in mitigating and adapting societies to ecological changes (Armstrong, 2023; Tobin, 2019). In Zambia, the debate on the role of local authorities in ecological governance has not gained prominence among academics. Nonetheless, the Zambian government has shown a significant will to devolve major functions of government, including environmental management, to local authorities. This change raises the question of the capacity of local authorities not only for environmental governance but for every aspect of public administration at the local level. Therefore, this study endeavours to contribute to this growing body of knowledge by focusing on ecological governance in the Kafue wetlands.

Coupled with low preparedness capabilities, Zambia is prone to and projected to be highly affected by the adverse effects of climate change and associated disaster risks by 2060 (Banda et al., 2022). To address this problem, the Zambian government has legislated that all statutory local government, district or municipal development planning and budgeting should be done through participatory 10 year municipality integrated development plans (IDP), which was launched in 2015. However, there is little mention of decentralising climate change governance in the Urban and Regional Planning Act, No. 3 of 2015, which saw a shift from the sectoral planning approach. Under the act, the master planning processes that were promulgated under the repealed Town and Country Planning Act (Chapter 283 of the Laws of Zambia) were shifted to an integrated planning approach. This planning method was more comprehensive and embraced the social, environmental and economic spheres of planning, thereby allowing local areas to thrive sustainably. As a new approach in Zambia, IDPs are initiatives of the central government intended to encourage government line ministries or departments at the district level to plan, document and implement their developmental options in unison. However, these line ministries or departments have independent statutory mandates that do not necessarily oblige them to collaborate with other ministries or departments to achieve their respective or individually mandated goals.

Challenges and Opportunities of Decentralising Climate Governance

In Zambia and countries with similar challenges, all four strategies of decentralising climate governance are critical to the effective management of climate initiatives and programmes at subnational levels. The institutional mechanisms for devolution, delegation, deconcentration and privatisation all present unique opportunities and

challenges in mitigating the negative aspects of climate change at the subnational level. Through decentralised climate governance, the institutional mechanisms at subnational levels can leverage their proximity to affected communities to ensure that climate resilience and adaptation are mainstreamed into various aspects of community life (Kern & Bulkeley, 2009). Decentralising climate governance in the Kafue wetlands presents anticipated challenges, some of which have already been identified by local authorities in Global South countries. However, the Kafue wetlands of Itezhi-Tezhi offer some interesting and unique lessons and opportunities for building resilience in climate adaptation and mitigation in vulnerable areas. This section discusses the challenges of decentralising climate governance in the Kafue wetlands, focusing on the efficacy of the policy framework for climate governance and the obstacles and benefits of devolution, delegation, deconcentration and privatisation of climate governance at the subnational level. Opportunities for building resilience are also identified.

Policy Framework for Climate Governance in Zambia

The problem of climate change has been of major concern to successive Zambian governments. Regarding Zambia's policy and regulatory framework, the National Climate Change Policy outlines the country's strategy for addressing climate change. The policy emphasises strategies for addressing the effects of climate change and seeks to mainstream climate change action into various sectors of governance in the country. In addition, the Zambian government has devised a Climate Change Response Strategy, which is designed to operationalise the National Climate Policy of 2017 and provide a framework for the implementation of climate change initiatives and projects across sectors. The Zambian government has also enacted the Renewable Energy Policy. Although the policy does not exclusively address climate change, it aims to promote the development and use of renewable resources, thus contributing to climate change mitigation in Zambia.

Furthermore, Zambia has been involved in other climate change-related initiatives, such as the UN programme, 'Reducing Emissions from Deforestation and Forest Degradation in Developing Countries' (REDD+). Zambia has developed a National REDD+ Strategy to address deforestation and promote responsible forest management. The country also has an active Disaster Management and Mitigation Unit under the Office of the Vice President. While not entirely focusing on climate change, the unit has played a critical role in disaster risk reduction and response, especially in climate-related disasters such as floods and droughts. Zambia also has several other policies in agriculture and water management that contribute to climate change management. Both the agricultural and water management policies have specific strategies and guidelines for addressing and considering climate change impacts on water quality and availability.

The Zambian government has also implemented a Climate Change Adaptation Plan, which provides a comprehensive approach to climate governance in the country. In 2021, the Zambian government created a full ministry overseeing climate change and environmental matters (Chijikwa, 2023). At the same time, the Zambian government clarified the intent to devolve ecological governance to local authorities after announcing

that major public service functions, such as health and education, were being earmarked for full-scale devolution to local authorities (Tembo & Mwanaumo, 2022). These efforts demonstrate the importance the government has attached to issues of climate change.

Furthermore, in pursuit of the country's desire to decentralise the system of governance, Zambia became a state party to the 2015 African Charter on the Values and Principles of Decentralisation, Local Governance and Local Development (Muesiri & Ojong, 2018). In addition, decentralisation has been entrenched in the Constitution of Zambia through the (Amendment) Act No. 2 of 2016, thereby cementing Zambia's resolve towards a decentralised system of government. Articles 147 and 148 of the 2016 amendment gave a full legal mandate to the implementation of the National Decentralisation Policy. In Article 147 (1), the Constitution provides that the management and administration of the political, social, legal and economic affairs of the state shall be devolved from the national government level to the local government level. Further, Article 147 (2) of the Constitution provides an annex listing the concurrent and exclusive functions at the national, provincial and local government levels. Article 148 provides that local governance shall be undertaken through substructures and that the government shall provide adequate resources for the performance of the functions of the substructures. The revised National Decentralisation Policy includes the election of mayors or council chairpersons by universal suffrage. Additionally, the policy establishes ward development committees and constituency development fund committees to strengthen citizen participation in local development, including climate governance. The revised National Decentralisation Policy has also strengthened the position of traditional leaders in climate governance through their participation in the House of Chiefs, councils, the constituency development fund and ward development committees.

However, there are gaps and inconsistencies in the national policies that are likely to affect the effective implementation of decentralised climate governance in the Kafue wetlands of Itezhi-Tezhi. While the national policies allocate resources for climate initiatives, few resources are allocated for climate change-related activities at the local level. In addition, this study shows that local initiatives, such as the Strengthening Climate Resilience in the Kafue sub-Basin (SCRIKA) project have funding sources other than the central government (Banda et al., 2022). Similarly, national policies emphasise the importance of building capacity for climate change across all sectors, whereas the efforts by local governments have been insufficient to build human resource capacity for addressing the challenges associated with climate change. We interviewed an environmental officer at the district administration who indicated that the council usually has unique needs, such as road rehabilitation in the townships, and has scant capacity to channel those resources towards projects for capacity-building.

In addition, a gap is seen in the translation of national policies on climate change into actionable programmes at the community level (Banda et al., 2021). As many interviewees indicated, the local government in the Kafue wetlands has little capacity or incentive to enforce regulations contained in the national policy framework on climate change. The enforcement of climate change regulations in the Kafue wetlands has mostly been affected by geographical barriers due to the size and terrain because the Kafue

wetlands become impassable during the rainy season from December to March. The national policy emphasises public participation; however, this focus has been limited because the local government lacks the capacity to engage the public in the most vulnerable locales of the wetland because the area becomes waterlogged during the rainy season. The other reason for limited capacity for community engagement is a lack of financial resources to commit towards community sensitisation in such a vast wetland. The Kafue wetlands are a distinctive ecosystem whose vulnerability to climate change varies, yet the national regulations offer little consideration to the diverse and unique wetlands in Zambia. In the quest for decentralising climate governance practically, opportunities and challenges exist despite gaps in the policy framework and inconsistencies in implementation. The next sections will address these issues.

Devolution and Climate Governance

As noted in the overture to this article, the devolution of climate governance involves transferring some political, administrative and fiscal responsibilities to local elected leaders at the grassroots level. The devolution of administrative, political and fiscal responsibilities means that the ward councillors and council chairpersons influence local initiatives, including climate financing at the subnational level. Regarding political structure, Itezhi-Tezhi has a total of 13 elected councillors representing each ward. Note that five of the 13 wards are located in the Kafue wetlands. The political head of the district is the council chairperson (equivalent to a mayor in a city or municipality), who is elected by the people in a general election. Administratively, the district is headed by a district commissioner, who is appointed by the president of the republic. The district commissioner serves as a crucial link between policies made by the central government and local understanding, enabling the implementation of strategies tailored to the specific circumstances and needs of local communities (Khazali, 2022; Sauquet et al., 2014; Waterman, 2013).

However, there are fears that the devolution of climate governance in the Kafue wetlands is likely to be affected by political interference, which often leads to the imposition of requirements or the discontinuation of climate initiatives (Bleda et al., 2023; Chabwela & Haller, 2010; Petrovics et al., 2024). In our interviews with ward councillors, a theme was a fear of government interference based on past impositions from the central government. For example, maintenance on the climate resilience Namwala Road (known as D180) leading to the Kafue wetlands was abandoned shortly after the change of government in 2021. A climate-resilient road is designed to withstand and adapt to the impacts of climate change, such as extreme weather events. However, the government authorised the use of ZMW2 million (about USD77 million) of the Constituency Development Fund in 2022 for the rehabilitation of the 40-kilometre-long Itezhi-Tezhi-Mongu junction road (D769). While this is a commendable gesture by the central government, climate governance, particularly the maintenance of climate resilience roads, requires long-term and sustained efforts without political interference, which leads to inconsistent priorities and undermines the continuity of climate initiatives.

Delegation and Climate Governance

As noted earlier, delegation is the assignment of both administrative and fiscal responsibilities of the state to local governments. This form of decentralisation gives the responsibilities of climate governance to public corporations or agencies of the government. A number of public corporations or parastatals are involved in several projects in Itezhi-Tezhi, including the Itezhi-Tezhi Power Corporation (ITTPC); ZESCO, which is Zambia's largest power utility company and a state-owned enterprise; the Zambia Environmental Management Agency (ZEMA) and the Water Resources Management Authority (WARMA). The last two entities have no targeted initiatives in the Kafue wetlands. ZESCO and ITTPC, however, have played crucial roles in climate projects, including climate financing in the Kafue flats. In particular, the companies were involved in efforts related to the operation of two dams built in 1971 and 1978 that altered the natural flooding regime of the internationally recognised Kafue wetland. This flooding alteration had significant impacts on both wildlife and local livelihoods. Consequently, through the Zambian Ministry of Energy and Water Development, the government delegated ZESCO and ITTPC to change the operational regime of the Itezhi-Tezhi and Lower Kafue Gorge dams to replicate natural flood patterns. The objective was to restore freshwater and floodplain ecosystems and enhance food security in the Kafue wetlands (Merten & Haller, 2008). The new flow regime is now in operation, but the work continues through a detailed monitoring programme to ensure that a clear picture of the costs and benefits emerges.

In addition, some aspects of climate governance in Zambia have been delegated to the WARMA under the Water Resources Management Act of 2011, which replaced the Water Board and Department of Water Resources. The main purpose of WARMA is to serve as a regulatory agency for the management and development of water resources across Zambia. Note that WARMA operates in four catchment areas, namely the Chambeshi, Luangwa, Zambezi and Kafue catchment areas, which include parts of Itezhi-Tezhi. The authority is also responsible for water resources management and development, including land and environmental issues. WARMA delegates authority to catchment management councils (CMCs), sub-catchment councils (SCCs), and water user associations (WUAs). The process of establishing these local institutions in the Kafue flats catchment area has been rolled out over the past decade.

However, the effectiveness of these local institutions in climate governance has been of concern to some traditional leaders and members of the public that we interviewed. For instance, there are concerns that traditional leaders who play a critical role in climate governance have been excluded from the operationalisation of CMCs in the Kafue flats. In our interviews with traditional leaders, a major concern from most organisations implementing environmental programmes in the Kafue wetlands was a lack of consultation by some organisations during the design of climate change initiatives. Although the 2023 revised National Decentralisation Policy emphasises the participation of traditional leaders in the design of climate initiatives at the local level, there has been limited participation of chiefs and village headmen in CMCs, SCCs or WUAs in climate-

related initiatives under WARMA. This limitation of participation is one of the major indictments of delegation as a strategy for decentralising climate governance in the Kafue wetlands of Itezhi-Tezhi. Therefore, having local participation mandated by the central government would greatly improve the participation of grassroots people in climate change programmes.

Another major challenge in delegating climate governance in Itezhi-Tezhi is climate financing. The only sources of climate financing among the institutions delegated to manage climate change-related issues in the Kafue wetlands have been ZESCO and the Ministry of Energy and Water Development. Other sources of funding for climate governance have been Wetlands International and the World Wide Fund for Nature (WWF) Netherlands, amounting to about EUR180,000 in 2012. In subsequent years, climate financing was much harder to find as the highly technical work required substantially higher budgets, exceeding EUR500,000. These figures are quite low compared to how much delegated institutions in the Global North countries invest in climate change at the local level. Therefore, the delegated model for climate governance requires more financial resources channelled through government agencies, such as WARMA or ZESCO and ITTPC to manage climate-related problems in the Kafue wetlands. Without adequate financial resources, rolling out CMCs, SCCs and WUAs under WARMA would be problematic in the long run.

Furthermore, there has been a delay in the establishment of institutional structures for decentralised climate governance under the WARMA Act of 2011. Some traditional chiefs interviewed in the district raised concerns about the slowness of the bureaucracy in facilitating a transition due to fears of the high operational costs of decentralising WARMA to local authorities. At the moment, WARMA is financed through water fees, permits, government grants, subventions and donations. In addition, the revised National Decentralisation Policy has some gaps regarding clarity of institutional roles and responsibilities. For instance, WUAs are envisaged to be mechanisms for water users to collectively manage water resources at the community level. This structure is similar to other mechanisms, such as ward development committees and area development committees established under the 2023 revised National Decentralisation Policy, which are also critical for decision-making at the community level. There is a need to clarify and harmonise the roles of these institutions for effective climate governance at the community level.

Deconcentration and Climate Governance

As a strategy for decentralising climate governance, deconcentration is the redistribution of administrative and decision-making powers from a central government to local authorities at the same administrative level. It is envisaged that deconcentration – which allows for greater responsiveness to climate challenges in the Kafue flats – would be a major boost in Zambia's quest to tailor climate initiatives and actions to address specific vulnerabilities in Itezhi-Tezhi. The decentralisation strategy of deconcentration suggests that if effective climate governance is to be realised at the subnational level, the Ministry of Green Economy and Environment and the Ministry of Lands and Natural

Resources should transfer some administrative responsibilities to the Itezhi-Tezhi District Council. In addition, as a mechanism for decentralising climate governance, deconcentration would lead to a more efficient and effective way of confronting climate issues in the Kafue wetlands of Itezhi-Tezhi because it reduces the bureaucracy associated with the central government and ministry headquarters.

However, deconcentration as a strategy for decentralising climate governance in the Kafue wetlands of Itezhi-Tezhi is likely to be challenging due to a number of factors associated with key stakeholders. First, the coordination of climate governance is likely to be problematic. While the newly created Ministry of Green Economy and Environment is the focal point in climate governance at the national level, the decentralisation of sector ministries does not include climate governance units from the line ministry. Second, there is little activity to harmonise legislation, policy frameworks and enablers that relate to climate governance at the local government level (Banda et al., 2022; Obergassel et al., 2023). This study also reveals that there has been little effort to encourage conceptual harmonisation of the central government and agencies and municipal responsibilities at the local level. Finally, there has been minimal action by the government to conceptually promote the mainstreaming of climate governance into district development plans and integrated municipal development plans. Nevertheless, with the creation of the Ministry of Green Economy and Environment in 2021, there is political will and international donor support for climate change initiatives.

Privatisation and Climate Governance

Privatisation of climate governance entails ceding some economic and participatory responsibilities to private organisations. The key stakeholders in the privatisation of climate governance at the local level are agriculture cooperatives or clubs, farmers' unions, NGOs involved in climate governance and international organisations. Several international organisations are involved in climate change at the local level in the Kafue flats, including the African Development Bank (AfDB), the World Bank, the WWF and local NGOs, such as the Wildlife and Environmental Council of Zambia and the Chongololo and Chipembele Conservation Clubs. These organisations have been involved in several initiatives and projects at the community level, as shown in Table 3.

The justification for employing privatisation as a tactic to decentralise climate governance in the Kafue wetlands stems from the belief that private entities exhibit greater efficiency compared to governmental bodies. For instance, the implementation of privatisation has facilitated the adoption of eco-friendly solutions to combat climate change, such as the integration of solar panels to harness energy in various regions within the Kafue wetlands. Moreover, international entities like AfDB and the World Bank, alongside local organisations, operate with reduced political intervention and are less susceptible to transient political considerations and shifts in governmental leadership. This autonomy enables them to pursue enduring, sustainable climate strategies without undue influence from political figures.

In utilising privatisation as a means to decentralise climate governance in the Kafue wetlands, the rationale lies in the perceived efficiency of private entities over government

agencies. A notable example is the deployment of green technologies, including solar panels, to tackle climate change challenges across different parts of the Kafue wetlands. Moreover, international bodies like AfDB and the World Bank, in conjunction with local organisations, operate with minimal political interference and are less vulnerable to the short-term political agendas and changes in government, allowing them to pursue enduring, sustainable climate strategies independently of political influence.

Table 3. Private Climate Change Projects in the Kafue Wetlands of Itezhi-Tezhi
Source: Processed by Authors (2023)

Private Entities	Project
AfDB	Strengthening Climate Resilience in the Kafue sub-Basin (SCRIKA)
World Bank	Itezhi-Tezhi hydropower project
WWF	Restoring the Kafue Flats –Global Water Partnership and Kafue Flats integrated water resources management project
Wildlife and Environmental Council of Zambia	Community coined climate actions and dialogue project
Chongololo & Chipembele Conservation Clubs	Platforms for children and youth participation in climate action

However, privatisation as a mechanism for decentralising climate governance faces challenges in the Kafue wetlands. The majority of ward councillors and traditional leaders interviewed were concerned that private entities rarely consult local institutions and stakeholders when designing their climate initiatives. In 2016, when AfDB embarked on the SCRIKA project with an initial grant of USD18.5 million towards community-driven participatory adaptation, much was expected about the prospects of the project. The goal of SCRIKA was to enhance community participation in climate change programmes in the Kafue wetlands. Despite this gesture by the Zambian government and the AfDB, participation by local communities in the design and implementation of this project has been dismal. Traditional leaders and ordinary citizens in remote areas of the Kafue wetlands have expressed concerns that there is limited community engagement by the implementers of the SCRIKA project on matters of climate change in the area. This low participation has resulted in a disconnect between local realities and what the local authority has envisioned, leading to the implementation of programmes that do not tally with the community and its unique ecological challenges. Other research also indicates that communities that are not engaged in the design of programmes are unlikely to take ownership and feel motivated to participate in the implementation and maintenance of

climate-friendly policies and programmes in the district (Furness & Nelson, 2015; Nora & Irwan, 2019).

In addition, there are concerns that community engagement has been low due to a lack of behavioural change and social acceptance by some members of the community, particularly in remote areas. For instance, while the Itezhi-Tezhi District Council has conducted some awareness programmes aimed at curbing activities that exacerbate climate change, such as tree-cutting, the community has failed to adhere to such directives. Some members of the communities interviewed stated that the lack of engagement has resulted in resistance to new practices. As noted by Funder & Mweemba (2019), decentralising climate governance in the Kafue wetlands will be affected in the long run by inadequate public participation in the design and implementation of climate programmes and initiatives in the Kafue wetlands. Moreover, it has been observed elsewhere that community engagement facilitates the communication of climate-related information and the promotion of sustainable practices. When local communities in the Kafue wetlands understand the rationale behind specific actions by the local authorities and are involved in their design, there is a higher likelihood of behavioural change and the adoption of climate-friendly practices at the subnational level.

Conclusion

This article has demonstrated the obstacles and opportunities of decentralising climate governance in the Global South in general and the Kafue wetlands of Itezhi-Tezhi in Zambia in particular. The research shows that decentralisation – which involves the devolution, delegation, deconcentration and privatisation of administrative authority from the national government to subnational units – has both benefits and challenges. Building resilience for climate change impacts at the local level is not a simple task. However, with a clear plan, much can be achieved in building resilience for decentralised climate governance in the Kafue wetlands of Itezhi-Tezhi.

Several paths lead to decentralised climate governance in the Kafue wetlands of Itezhi-Tezhi. From the foregoing discussions, the devolution of climate governance is likely to be affected by overlapping roles of elected officials and district commissioners. Therefore, there is a need to establish a clear legal and policy framework defining the roles of district commissioners and elected officials who represent local authorities regarding climate governance at the local level. This legislation should specify the limits of the district commissioner's office and clearly outline the areas in which the local authority is independent of the political influences of the central government. This clarity can minimise ambiguity and prevent political interference in the implementation of climate-related projects that require long-term implementation, such as road maintenance. In addition, investments in training and capacity-building for elected officials are needed to enhance their knowledge of climate change. If elected officials are trained periodically, they will be better equipped to manage climate-related programmes at the local level, which reduces the perceived need for intervention by the central government.

Decentralising climate governance is likely to be affected by an inadequate presence of government agencies mandated to oversee the implementation of climate-related issues at the local level. Among the key government institutions, ZEMA and WARMA play critical roles in climate-related issues in Zambia. However, both organisations have a limited presence at the local level. Therefore, establishing permanent offices for ZEMA and WARMA at the local level can lead to effective and localised decision-making. In this way, the agencies can play a vital role in local environmental and water management issues unique to the Kafue wetlands of Itezhi-Tezhi. Moreover, these organisations can facilitate the design of regulations, policies, initiatives and interventions that are specific to the characteristics of the Kafue wetlands. The Kafue wetlands have been facing rapid transformation due to changes brought about as a result of the dam construction. Thus, local offices for ZEMA and WARMA could enhance the ability to respond and monitor enforcement of the activities in the Kafue wetlands by conducting inspection and monitoring of environmental and water management activities at the local level.

One of the most troubling issues concerning the deconcentration of climate governance in the Kafue wetlands is the capacity of local authorities to manage climate change issues at the local level. To build resilience, decentralising units of the Ministry of Green Economy and Environment as well as the Ministry of Lands and Natural Resources to local authorities can have a positive impact in promoting effective natural resource management in the Kafue wetlands of Itezhi-Tezhi. Researchers have noted that decentralising these functional units would equip the local authority with the necessary human resource capacity as well as better familiarisation with specific environmental and land-management issues in the Kafue wetlands. The decentralised units from the Ministry of Green Economy and Environment and the Ministry of Lands and Natural Resources would allow for better decision-making and efficient management of natural resources. Localised units allow for more effective and sustainable use of natural resources based on local resources and needs.

The most promising method of decentralising climate governance in the Kafue wetlands has been privatisation because private and international organisations have received more funding and technical support for climate change initiatives than governmental entities. However, this strategy has not been effective due to inadequate participation by local people in the area. Public participation in the design of climate-related initiatives is crucial for ensuring that the process is inclusive, transparent and aligned with the needs and aspirations of local populations in the Kafue wetlands of Itezhi-Tezhi.

Note that the Kafue wetlands are culturally significant to the pastoralist farmers who depend on the wetlands for their socioeconomic livelihood. Public participation can therefore ensure that privatisation efforts are culturally sensitive and socially equitable. Local communities who depend on the Kafue wetlands for their economic livelihood can provide insights into cultural practices, social structures and equity considerations that can influence the success of climate initiatives by private entities. This local participation is crucial for avoiding unintended consequences and fostering social justice at the

community level. In addition, adequate participation can lead to the identification of innovative solutions as local communities have unique insights into how to adapt and mitigate climate change based on their experiences and traditional knowledge of the Kafue wetlands.

Acknowledgement

We extend our heartfelt gratitude to the University of Zambia for their generous support and provision of resources essential for the completion of this research. Additionally, we would like to express our appreciation to our esteemed colleagues for their invaluable insights and unwavering assistance throughout this endeavor. Finally, we thank all individuals and organizations involved in this study for their contributions, cooperation, and participation, which have greatly enriched our research.

References

Almeida, A. M., Delgado, F., Roque, N., Ribeiro, M. M., & Fernandez, P. (2023). Multitemporal Land Use and Cover Analysis Coupled with Climatic Change Scenarios to Protect the Endangered Taxon Asphodelus bento-rainhae subsp. bento-rainhae. *Plants*, *12*(16), 2914. https://doi.org/10.3390/plants12162914

Ampaire, E. L., Jassogne, L., Providence, H., Acosta, M., Twyman, J., Winowiecki, L., & van Asten, P. (2017). Institutional challenges to climate change adaptation: A case study on policy action gaps in Uganda. *Environmental Science & Policy*, *75*, 81–90. https://doi.org/10.1016/j.envsci.2017.05.013

Anguelovski, I., Cole, H., Connolly, J., & Triguero-Mas, M. (2018). Do green neighbourhoods promote urban health justice? *The Lancet Public Health*, *3*(6), e270. https://doi.org/10.1016/s2468-2667(18)30096-3

Armstrong, J. H. (2023). Formal local government coordination to mitigate climate change. *Urban Climate*, *51*, 101636. https://doi.org/10.1016/j.uclim.2023.101636

Banda, B., van Niekerk, D., Nemakonde, L., & Granvorka, C. (2021). Integrated development planning in Zambia: Ideological lens, theoretical underpinnings, current practices, views of the planners. *Development Southern Africa*, *39*(3), 338–353. https://doi.org/10.1080/0376835x.2020.1868289

Banda, B., van Niekerk, D., Nemakonde, L., & Granvorka, C. (2022). Legal and policy frameworks to harmonise and mainstream climate and disaster resilience options into municipality integrated development plans: A case of Zambia. *International Journal of Disaster Risk Reduction*, *81*, 103269.

Beeri, I., & Zaidan, A. (2023). Merging, disaggregating and clustering local authorities: do structural reforms affect perceptions about local governance and democracy?. *Territory, Politics, Governance, 11*(7), 1413-1438.

Bleda, M., Krull, E., Pinkse, J., & Christodoulou, E. (2023). Organizational heuristics and firms' sensemaking for climate change adaptation. *Business Strategy and the Environment*, *32*(8), 6124-6137. https://doi.org/10.1002/bse.3476

Borie, M., Pelling, M., Ziervogel, G., & Hyams, K. (2019). Mapping narratives of urban resilience in the global south. *Global environmental change*, *54*, 203-213.

Chabwela, H. N., & Haller, T. (2010). Governance issues, potentials and failures of participatory collective action in the Kafue Flats, Zambia. *International Journal of the Commons*, *4*(2), 621-642.

Chansa, W., & Kampamba, G. (2009). The population status of the Kafue Lechwe in the Kafue Flats, Zambia. *African Journal of Ecology*. https://doi.org/10.1111/j.1365-2028.2009.01188.x

Chijikwa, H. (2023). Does the Zambian Legal Environment Support Informal Enterprises `Transition into the Formal Economy? *Global Journal of Management and Business Research*, 29–36. https://doi.org/10.34257/gjmbrbvol23is4pg29

Chikulo, B. (2010). Democratic local governance in the Southern African Development Community region: Some emerging issues and challenges. *Commonwealth Journal of Local Governance*, 145–157. https://doi.org/10.5130/cjlg.v0i5.1479

Creswell, J. W. (2021). *A concise introduction to mixed methods research*. SAGE publications.

Collier, U. (1997). Local authorities and climate protection in the European Union: Putting subsidiarity into practice? *Local Environment*, *2*(1), 39–57.

De Groote, H., Gitonga, Z. M., & Sonder, K. (2023). Maize storage losses, climate, and climate change in Zambia. *Food Security*, *15*(4), 879–899.

de Loma-Osorio, G. F. Y. (2016). The 2030 Agenda for Sustainable Development: Bringing Climate Justice to Climate Action. *Development*, *59*(3–4), 223–228.

Ellul, J. (2021). *The technological society*. Vintage.

Funder, M., & Mweemba, C. E. (2019). Interface bureaucrats and the everyday remaking of climate interventions: Evidence from climate change adaptation in Zambia. *Global Environmental Change*, *55*, 130–138.

Furness, E., & Nelson, H. (2015). Are human values and community participation key to climate adaptation? The case of community forest organisations in British Columbia. *Climatic Change*, *135*(2), 243–259.

Gasco-Hernandez, M., Nasi, G., Cucciniello, M., & Hiedemann, A. M. (2022). The role of organizational capacity to foster digital transformation in local governments: The case of three European smart cities. *Urban Governance*, *2*(2), 236–246.

Guest, G., Namey, E., & McKenna, K. (2016). How Many Focus Groups Are Enough? Building an Evidence Base for Nonprobability Sample Sizes. *Field Methods*, *29*(1), 3–22. https://doi.org/10.1177/1525822x16639015

Kern, K., & Bulkeley, H. (2009). Cities, Europeanization and Multi-level Governance: Governing Climate Change through Transnational Municipal Networks. *JCMS: Journal of Common Market Studies*, *47*(2), 309–332.

Khazali, N. Q. (2022). Local governments and vulnerable groups in Iraq after 2003. *Tikrit Journal for Political Science*, *2*(28), 151–175.

Kisambira, Z. N., & Songcai, Y. (2022). Climate Change Policy Landscape in Uganda: Assessment of the Extent of Implementation of Adaptation Policies at the Local Government Level. *SSRN Electronic Journal*.

Kotze, L. J., & Du Plessis, A. (2006). The Inception and Role of International Environmental Law in Domestic Biodiversity Conservation Efforts: The South African Experience. *QUT Law Review*, *6*(1). https://doi.org/10.5204/qutlr.v6i1.191

Leck, H., & Simon, D. (2018). Local Authority Responses to Climate Change in South Africa: The Challenges of Transboundary Governance. *Sustainability*, *10*(7), 2542.

Lervik, M., & Sutherland, C. (2017). Local Climate Governance in the Global South: The case of eThekwini Municipality and the Responsible Accommodation Campaign. *Environmental Policy and Governance*, *27*(4), 325–335.

Makondo, C. C., Chola, K., & Moonga, B. (2014). Climate change adaptation and vulnerability: A case of rain dependent small-holder farmers in selected districts in Zambia. *American Journal of Climate Change*, *3*(4), 388–403.

Merten, S., & Haller, T. (2008). Property rights, food security and child growth: Dynamics of insecurity in the Kafue Flats of Zambia. *Food Policy*, *33*(5), 434-443.

Muesiri, O., & Ojong, V. (2018). The African Union of Local Authorities (AULA) and global trends in regional management of grassroots institutions: responses and lapses. *Journal of African Union Studies*, *7*(1), 233–259. https://doi.org/10.31920/2050-4306/2018/v7n1a12

Napoli, C. (2013). A decentralised approach to emissions reductions. *Carbon & Climate Law Review*, *7*(1), 24–33.

Ndambwa, B. J. (2020). Electoral integrity and democratic consolidation, in democracy and electoral politics in Zambia. Brill.

Nora, F. I., & Irwan, M. (2019). Empowerment on climate change: how community-based organizations serving in growing participation from society. *Journal of Millennial Community*, *1*(1), 17.

Obergassel, W., Xia-Bauer, C., & Thomas, S. (2023). Strengthening global climate governance and international cooperation for energy-efficient buildings. *Energy Efficiency*, *16*(8), 100. https://doi.org/10.1007/s12053-023-10177-7

Obonyo, J. F., & Muhumuza, W. (2021). The nexus between the traditional system of governance and the local government system in Karamoja, Uganda. *Commonwealth Journal of Local Governance*, 116–132. https://doi.org/10.5130/cjlg.vi25.8042

Okafor, J. (2012). Constitutional Challenges of Creating New Local Government Areas in Nigeria. *Commonwealth Journal of Local Governance*, 104–115.

Olthof, J. (2021). Projecting a Future Present: Greta Thunberg's use of Presence at the United Nations Climate Action Summit 2019. *"Res Rhetorica", 8*(1), 67–82. https://doi.org/10.29107/rr2021.1.4

Omala, M. A. (2023). Power Relations in Climate Finance Coordination: The North-South Divide in Strategy and Implementation of Adaptation Programs in Nepal, Mozambique, Bangladesh, and Zambia. *Sustainability and Climate Change*, *16*(2), 150–161. https://doi.org/10.1089/scc.2022.0093

Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009). A qualitative framework for collecting and analyzing data in focus group research. *International journal of qualitative methods*, *8*(3), 1-21.

Osman, T. (2021). A framework for cities and environmental resilience assessment of local governments. *Cities*, *118*, 103372.

Park, J. C. (2012). The Presidential Commission on Devolution Promotion for Local Authorities Seen from a Governance Perspective: Achievements and Challenges. *Journal of Governance Studies*, *7*(2), 1–24.

Park, M. (2019). The sharing economy, regulations, and the role of local government. *International Journal of Tourism Cities*, *6*(1), 158–174.

Petrovics, D., Huitema, D., Giezen, M., & Vis, B. (2024). Scaling mechanisms of energy communities: A comparison of 28 initiatives. *Global Environmental Change*, *84*, 102780. https://doi.org/10.1016/j.gloenvcha.2023.102780

Sakapaji, S. C. (2021). Advancing Local Ecological Knowledge-Based Practices for Climate Change Adaptation, Resilience-Building, and Sustainability in Agriculture: A Case Study of Central and Southern Zambia. *The International Journal of Climate Change: Impacts and Responses*, *13*(2), 61–83.

Sauquet, A., Marchand, S., & Féres, J. G. (2014). Protected areas, local governments, and strategic interactions: The case of the ICMS-Ecológico in the Brazilian state of Paraná. *Ecological Economics*, *107*, 249–258.

Shabb, K., & McCormick, K. (2023). Achieving 100 climate neutral cities in Europe: Investigating climate city contracts in Sweden. *npj Climate Action*, *2*(1).

Sharma, V., Orindi, V., Hesse, C., Pattison, J., & Anderson, S. (2014). Supporting local climate adaptation planning and implementation through local governance and decentralised finance provision. *Development in Practice*, *24*(4), 579–590. https://doi.org/10.1080/09614524.2014.907240

Sidik, S. (2022). Side Benefits of Climate Action May Save Millions of Lives in Africa. *Eos*, *103*. https://doi.org/10.1029/2022eo220292

Sienkiewicz-Małyjurek, K. (2022). Social Capital and Transformational Leadership in Building the Resilience of Local Governance Networks. *Sustainability*, *14*(8), 4720. https://doi.org/10.3390/su14084720

Steiner, S. (2005). Decentralisation and Poverty Reduction: A Conceptual Framework for the Economic Impact. *SSRN Electronic Journal*.

Taylor, T., Muwowo, F., & Phiri, Z. (2018). Constraining Factors in Realizing Strategic Plan Objectives by Local Authorities in Zambia: Case of Kitwe City Council. *Strategic Public Management Journal*, *4*(7), 98–119.

Tembo, M., & Mwanaumo, E. M. (2022). Constraints in Implementing Decentralisation in Zambia. *International Journal of Scientific Research and Management*, *10*(06), 32–43. https://doi.org/10.18535/ijsrm/v10i6.ps01

Tobin, P. (2019). Governing climate change: polycentricity in action? *Local Government Studies*, *45*(4), 593–595. https://doi.org/10.1080/03003930.2019.1620523

Tshamano, N., & Shopola, M. (2021). Local Government and Climate Change: How Are Rural- Local Municipalities in Limpopo Province Coping with the Effects of Climate

Change? *African Renaissance*, *2021*(si1), 147–166. https://doi.org/10.31920/2516-5305/v2021sin1a8

Wang, M. (2024). Can environmental regulations change the environmental behaviour of local leaders and enterprises? Evidence using the accountability audit of natural resources in China. *Local Government Studies, 50*(2), 1–23.

Waterman, C. (2013). Local Government and Local Governance: 1944–2011. *Local Government Studies*, *40*(6), 938–953.

Wehkamp, J., Koch, N., Lübbers, S., & Fuss, S. (2018). Governance and deforestation — a meta-analysis in economics. *Ecological Economics*, *144*, 214–227.

Wu, Y., & Shi, Y. (2018). How does intergovernmental fiscal environment affect general fund balances of major American cities? *Local Government Studies*, *44*(6), 745–765. https://doi.org/10.1080/03003930.2018.1501365

Yalçın, M., & Lefèvre, B. (2012). Local climate action plans in France: Emergence, limitations and conditions for success. *Environmental Policy and Governance*, *22*(2), 104-115. https://doi.org/10.1002/eet.1575