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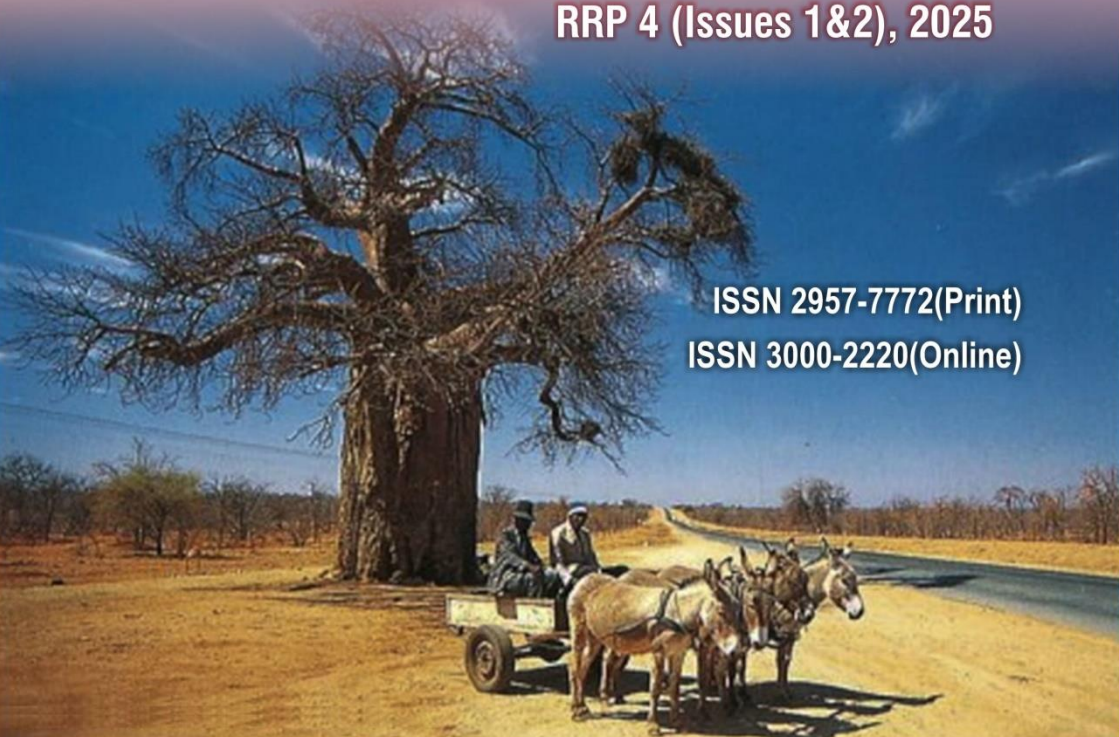
REVIEW OF Rural Resilience Praxis

RRP 4 (Issues 1&2), 2025

ISSN 2957-7772(Print)
ISSN 3000-2220(Online)



REVIEW OF
Rural Resilience Praxis

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ISSN 2957-7772 (Print)
ISSN 3000-2220 (Online)

Published by the Zimbabwe Ezekiel Guti University Press
Stand No. 1901 Barrassie Rd,
Off Shamva Road
Box 350
Bindura, Zimbabwe

Typeset by Divine Graphics
Printed by Divine Graphics

SUBSCRIPTION AND RATES
Zimbabwe Ezekiel Guti University Press Office
Stand No. 1901 Barrassie Rd,
Off Shamva Road
Box 350
Bindura, Zimbabwe
Telephone: ++263 8 677 006 136 | +263 779 279 912
E-mail: zegupress@admin.uz.ac.zw
http://www.zegu.ac.zw/press

About the Journal

JOURNAL PURPOSE

The purpose of the *Review of Rural Resilience Praxis is* to provide a forum for disaster risk mitigation, adaptation and preparedness.

CONTRIBUTION AND READERSHIP

Sociologists, demographers, psychologists, development experts, planners, social workers, social engineers, economists, among others whose focus is that of rural resilience.

JOURNAL SPECIFICATIONS

Review of Rural Resilience Praxis

ISSN 2957-7772(Print)
ISSN 3000-2220(Online)

SCOPE AND FOCUS

As much as the urban territory is increasing by each day, the rural economy, especially in many developing countries, still retains a great proportion of the extractive and accommodation industry. Retaining some space as rural remains critical given the sectors role in providing ecosystem services to both wildlife and humanity. In this light, rural resilience as practice beckons for critical studies especially in the face of the ever-threatening extreme weather events and climate change that then impact on the livelihoods and lifestyles of the rural communities. Review of Rural Resilience Praxis (RRRP) comes in as a platform for critical engagement by scholars, practitioners and leaders as they seek to debate and proffer solutions of the rural sector and trying to champion the philosophy of the right to be rural. The issue of conviviality between the different constituencies of the sectors, compiled with the competing challenges of improving rural spaces while also making the conservation and preservation debates matter is the hallmark of this platform of criticality. The journal is produced bi-annually.

Guidelines for Authors for the Review of Rural Resilience Praxis

Articles must be original contributions, not previously published and should not be under consideration for publishing elsewhere.

Manuscript Submission: Articles submitted to the *Review of Rural Resilience Praxis* are reviewed using the double-blind peer review system. The author's name(s) must not be included in the main text or running heads and footers.

A total number of words: 5000-7000 words and set in 12-point font size width with 1.5 line spacing.
Language: British/UK English
Title: must capture the gist and scope of the article
Names of authors: beginning with the first name and ending with the surname
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Abstract: must be 200 words
Keywords: must be five or six containing words that are not in the title
Body: Where the authors are more than three, use *et al.,*
Italicise *et al.*, *ibid.,* words that are not English, not names of people or organisations, etc. When you use several authors confirming the same point, state the point and bracket them in one bracket and in ascending order of dates and alphabetically separated by semi-colon e.g. (Falkenmark, 1989, 1990; Reddy, 2002; Dagdeviren and Robertson, 2011; Jacobsen *et al.,* 2012).

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Wetlands Governance in Rural Land Use Planning and Management: A Strategic Approach for Zimbabwe

WINMORE KUSENA[1], SHANTEL T DUBE[2] AND THOMAS MARAMBANYIKA[3]

Abstract

Due to their nature, wetlands are regarded as one of the most productive ecosystems offering a wide variety of ecosystem services. In rural setups, wetlands are most recognised for supporting agriculture and providing water to local communities. Despite their significance to rural populations, wetlands degradation remains a challenge due to less sustainable land use planning and management. The article explores the potential of wetlands governance as a strategic approach in rural land use planning and management in Zimbabwe. The study employs a comprehensive literature search and review from databases such as Google Scholar, Science Direct, Scopus and PubMed. The review concludes that incorporating wetlands governance into rural land use planning and management presents an opportunity to enhance sustainability and resilience in the rural landscapes of Zimbabwe. Literature has demonstrated that addressing governance gaps, fostering stakeholder participation, resolving land use conflicts and integrating conservation into land planning, are key steps towards sustainability. However, there is need for a more coordinated all-stakeholder involvement, including policy-makers, environmental agencies and local communities who directly interact with and depend on wetlands, in decision-making, implementation of conservation efforts and monitoring. To strengthen wetlands governance in rural land use planning and management, the article presents three key recommendations. First, clear legal statutes must be established to define the roles and responsibilities

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of all stakeholders involved in wetlands governance. Second, comprehensive research is needed to assess the impacts of various land uses on wetlands in rural landscapes, ensuring informed decision-making. Finally, integrated frameworks should be developed to embed wetlands governance into rural land use planning, ensuring a coordinated and effective approach.

Keywords: *land governance; land use functions; sustainability; wetland governance*

INTRODUCTION

According to the Ramsar Convention Article 1, wetlands are areas of marsh, fen, peatland, or water, whether natural or artificial, permanent or temporary, with static water tat or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six metres (The Ramsar Secretariat 2018). They are defined as ecological systems with either temporary or permanent waterlogging grasslands, marsh, swamps, papyrus, bogs, fertile floodplains and grassy fens (Kakuba and Kanyamurwa, 2021; Nabikyu *et al.*, 2023). In simple terms, wetlands are defined as all kinds of wet environments, whether temporarily or permanently (Balwan and Kour, 2021). Wetlands are regarded as one of the most productive ecosystems offering a wide variety of ecosystem services, namely supporting, provisioning, cultural and regulating services (Auzami and Shahnazi, 2020; Valizadeh *et al.*, 2021). This diversity of benefits highlights the critical importance of effective wetlands governance for sustainability. The major functions of wetlands include groundwater recharge, flood control, carbon sequestration, biodiversity support, water storage and livelihood sources, for example, fishing, amongst others (Alikhani *et al.*, 2021; Balwan and Kour, 2021). Through these ecological functions, wetlands provide many significant ecosystem services to the people, both directly and indirectly (Thapa *et al.*, 2020; Mandal *et al.*, 2021).

The significance of wetland ecosystem services is very apparent in Sub-Saharan Africa where wetlands play a crucial role in supporting the livelihoods of the people (Dixon *et al.*, 2021; Thamaga *et al.*, 2022). In rural setups, wetlands are most recognised for their role in supporting agriculture

and providing water to the local communities (Marambanyika, *et al.*, 2021; Mandishona and Knight, 2022). Most of the Zimbabwean population (61.4%) resides in rural areas (Zimstat, 2022) and rely on natural resources, including wetlands, for livelihoods (Marambanyika *et al.*, 2021; Musasa and Marambanyika, 2022). Additionally, wetlands have become more than just livelihood sources, but also adaptation strategies in the context of climate change and variability, increased socio-economic and other environmental pressures (Mushore *et al.*, 2021; Mukwashi *et al.*, 2024). Thus, wetland protection and conservation in rural Zimbabwe should be treated with utmost urgency to reduce the vulnerability of the rural dwellers (Matamanda *et al.*, 2020; Chirisa 2021; Nyambo *et al.*, 2024). Sustainable management of wetlands in rural areas remains a challenge due to several factors such as land degradation, water scarcity and land shortages, amongst others (Zou *et al.*, 2018; Dixon *et al.*, 2021). However, Dixon *et al.* (2021) argue that most of the wetlands in rural areas are among the most threatened ecosystems due to existing land use planning and management practices which give less attention to wetlands protection and conservation. As a result, there is need for effective strategies that support sustainable land use planning and management to safeguard wetland ecosystems. Therefore, the article explores the potential of wetlands governance as a strategic approach in rural land use planning and management in Zimbabwe.

THEORETICAL FRAMEWORK

This study is grounded in the Common-Pool Resource (CPR) Theory, as formulated by Ostrom (1990), which asserts that natural resources such as wetlands are vulnerable to overuse and degradation due to their shared access. The foundational idea behind this theory was initially highlighted by Hardin (1968) in *The Tragedy of the Commons*, which illustrates how individuals, acting in their self-interest, can exploit common resources to the point of depletion, ultimately leading to collective resource failure. The CPR framework emphasises the necessity of collective action, stakeholder participation and localised governance structures to ensure the sustainable management of wetlands. In Zimbabwe, the absence of well-defined formal local governance mechanisms has contributed to the ineffective management and subsequent degradation of wetlands. Consequently, CPR Theory provides

a relevant lens for advocating inclusive governance models that promote resource sustainability.

Complementing the CPR framework, the Land Use Function (LUF) framework further informs this study by linking wetland conservation to broader land-use planning. According to Verburg *et al.* (2009), LUF observes how land-use decisions must balance ecological, social and economic functions to achieve sustainable outcomes. Within the context of wetland governance, LUF underscores the need to integrate conservation efforts with rural development priorities, ensuring that wetlands support both livelihoods and ecological integrity. By synthesizing these theoretical perspectives, this study offers a structured approach to examining wetlands governance as a strategic tool for rural land-use planning and management. The interplay between governance, resource management and land-use functions provides critical insights into the challenges and potential solutions for wetland conservation in Zimbabwe.

STUDY AREA

Zimbabwe is a landlocked country situated in the Southern region of Africa between the latitudes 15° and 23°S. Its approximate population according to the recent census is 15 million, with 61.4% of the total population residing in rural areas (ZimStat, 2022). The country receives rains and relatively high temperatures between October to March and the dry season stretches from April to August. The coldest months are from May to July. The country is divided into five natural farming regions, sometimes known as agroecological zones according to rainfall patterns and farming systems. Natural region I receives the highest rainfall (over 1 000ml) annually and natural region V receives the lowest rainfall (less than 500m) annually (Manatsa *et al.*, 2020). The main livelihood sources for rural dwellers in Zimbabwe revolve around agriculture, that is, subsistence farming and livestock rearing with only a small proportion of the population involved in commercial farming. Recently, the country has been faced with severe climate-induced droughts, with devastating results for rural agriculture. In some parts of the country, dryland agriculture has been abandoned completely for irrigation due to long dry spells experienced (Masukwedza *et al.*, 2025). However, irrigation has also

not been able to sustain the rural communities as the water levels can only sustain communities to a certain extent before they diminish.

The country is endowed with wetlands covering 34.96 % of Zimbabwe's total surface area, which is approximately 13 659 579 ha (Zimbabwe National Wetlands Masterplan, 2021). Of the existing wetlands, 17.63 % are in pristine condition, 55.65 % moderately degraded and 26.72 % severely degraded. Almost 60% of these wetlands are found in rural Zimbabwe (Musasa and Marambanyika, 2020). In most cases, these wetlands are used to support the livelihoods of the rural dwellers but are also vulnerable to various anthropogenic activities encompassing less sustainable land use planning and management.

LITERATURE SEARCH

The research employs a comprehensive literature search and review of previous publications. Published literature was retrieved from databases such as Google Scholar, Science Direct, Scopus and PubMed. Grey literature such as reports and policy documents were also analysed. A systematic search was conducted using keywords; "Wetland Governance"; "Rural Land Use Planning"; "Wetland Governance and Rural Land Use Planning and Management", "Land Governance", "Land Use Functions" and, "Zimbabwe". The search engine was customised to capture related literature from the year 2018 to 2025. Only literature published in the English language was used. The relevance of published papers was also determined by the title of the article and abstract content. Content analysis method (Kripperndorff, 2004) guides the analysis of literature findings.

RESULTS

OVERVIEW OF CURRENT WETLANDS GOVERNANCE SYSTEM IN ZIMBABWE

Zimbabwe's wetland regulations, policies and practices are influenced largely by the provisions of the domesticated international conventions. The country signed the Ramsar Convention on wetlands in February 2012. The Ramsar Convention requires member states to recognise the ecological value of their wetlands and declare them Ramsar sites if they fit the category of international importance (Stroud and Davidson 2021; Mohanty *et al.*, 2024). Currently,

Zimbabwe has seven declared Ramsar sites, which are the Monavale vlei, Driefontein grasslands, Lake Chivero, Mana Pools, Victoria Falls National Park, Cleveland Dam and Chinhoyi Caves (Matamanda *et al.*, 2018; Mwonzora, 2022). The country is also a member state of the United Nations Convention on Biodiversity (UNCBD) (Kudumba 2022; Mudombi and Chigara, 2022). Signing and ratification of the abovementioned conventions was a move meant to not only foster sustainable management of wetlands, but also aid the achievement of the UN Sustainable Development Goals (SDGs). Further cementing its commitment to wetlands protection at the national and local scales are the various statutory institutions, policies, frameworks and laws for wetlands governance. These include the Environmental Management Agency (EMA) Act (Chapter 20:27), the Regional, Town and Country Planning Act (Chapter 29:12), the National Wetlands Policy, Wetland Management Guidelines and the Constitution of Zimbabwe (Matamanda and Chirisa, 2018; Mandishona and Knight, 2022; Mukwashi *et al.*, 2024). All these emphasise environmental protection, particularly the sustainable management of wetland resources.

However, some challenges and gaps exist within the Zimbabwean wetlands governance system (Mwonzora, 2022; Sharai, 2020; Mandishona and Knight, 2022). Although there has been increasing involvement of local communities in wetland use and management (Marambanyika and Beckedahl, 2016), the available wetlands governance legislation is not well-defined on local communities' roles and responsibilities in wetlands management, especially their expected level of participation in wetlands governance (Sharai *et al.*, 2020; Mandishona and Knight, 2022). There largely exists a top-down approach, a situation which usually excludes or undermines the real custodians of the wetland ecosystems from effectively participating in decision-making processes (Chikodzi, 2018; Sigauke, 2022). Owing to this, wetlands governance in Zimbabwe is poorly implemented. Therefore, challenges in rural land use planning and management practices continue to threaten wetland ecosystems. However, the promulgation of Wetland Management Guidelines is a right step towards practical guidance to wetland use.

CHALLENGES IN RURAL LAND USE PLANNING AND MANAGEMENT IN ZIMBABWE

For optimal land use planning and management, decision-makers need to understand the LUF that influences land use planning and management as well as associated impacts (Miah *et al.,* 2018; Li *et al.,* 2021). The LUF is the kind of attribute or state in which various goods and services are provided to people either directly or indirectly (Gulvanin *et al.*, 2019; Zou *et al.*, 2020). The aim of land use planning and management is to ensure that the needs of the current generation are met without compromising the needs of future generations (Miah *et al.*, 2018; Grochowska and Małecka, 2020). In this regard, land use planning and management should align with the demands of the 2030 Agenda for Sustainable Development. However, there exists several factors challenging sustainable rural land use planning and management in Zimbabwe with high dependency on natural resource base for livelihoods being the major cause of this predicament. High dependency on the natural resource base for livelihoods in rural areas negatively impacts sustainable natural resource management, hence the high levels of environmental degradation in rural areas of Zimbabwe (Marambanyika *et al.,* 2021).

Another limiting factor in rural land use planning and management in Zimbabwe is conflicting land uses. In rural areas of Zimbabwe, the clash is usually between farmers and the environmental agencies (Sinthumule *et al.*, 2020; Macheka *et al.*, 2021). The climate change and variability problem has further exacerbated the problem by exposing agriculture to water scarcity (Tirivangisi and Nyahunda, 2019; Ndlovu *et al.*, 2020). The long dry spells and droughts have significantly impacted water availability, thus threatening the water and livelihood security of the rural dwellers (Mpala, 2021; Mwadzingeni *et al.*, 2022). The effects of this have been devastating to rural dwellers whose livelihoods depend on water availability (Chigumira, 2018; Tirivangisi and Nyahunda, 2018; World Bank, 2020; Mwadzingeni ., 2022). As such, the long dry spells and droughts have caused conflicts in rural land use planning and management (Nyamwasa *et al.*, 2018). Water scarcity has made dryland agriculture unsustainable, hence there is now competition for farming land on wetlands or near water sources due to frequent occurrence of droughts (Marambanyika *et al.*, 2021; Mpala, 2021). This, however, puts water resources, particularly wetlands, at risk of degradation and loss due to

over utilisation and pollution, amongst others. Notable is that increased socio-economic pressures disregard environmental prioritisation, hence unless these components are addressed, conflicting land uses will always undermine optimal land use planning and management in rural areas of Zimbabwe (Macheka *et al.*, 2021).

Additionally, urban expansion further challenges rural land use planning and management in Zimbabwe. The high rates of urbanisation in Zimbabwe have seen cities expanding beyond their boundaries to accommodate the growing population (Matsa and Mupepi, 2021; Matamanda *et al.*, 2024; Ndemo *et al.*, 2024). This horizontal expansion has led to the encroachment of previously reserved rural landscapes such as greenbelts and wetlands (Matsa and Mupepi, 2021; Matsa *et al.*, 2022). The increased demand for land in urban areas also undermines rural land use planning and management (Chigumira, 2018; Tirivangisi and Nyahuda, 2018). This is the case in the city of Gweru in the Midlands province of Zimbabwe, where high rates of urbanisation have led to the encroachment of surrounding rural landscapes (Matsa and Mupepi, 2021; Matsa *et al.*, 2022). Urban expansion causes ecological degradation and destroys the traditional livelihood sources for rural dwellers as agricultural land is subjected to different land uses (Song *et al.*, 2018; Bonye *et al.*, 2020). In this regard, urban expansion undermines rural land use planning and management, hence the continued high rates of environmental degradation in rural areas and other issues emanating from loss of livelihoods.

Challenges in sustainable rural land use planning and management in Zimbabwe are also attributed to the fragmented land governance systems (Kadenge and Chavunduka, 2019; Chavunduka and Tsikira, 2024). Zimbabwe has a multi-institutional arrangement with various legal structures, statutes and policies for land governance which include the Communal Lands Act (Chapter 20:04); the Rural District Councils Act (Chapter 29:13) and the Regional Town and Country Planning Act (Chapter 29:12) (Mandishona and Knight, 2022). In Zimbabwe, the state possesses all land rights although in rural areas, traditional leaders have been made custodians of the land on behalf of the state (Ingwani, 2021; Mutonono, 2021). However, despite the existence of this multi-institutional arrangement for land governance in Zimbabwe, there are still challenges in land use planning and management.

The various institutions entrusted with land governance in rural Zimbabwe are nearly incapacitated and vulnerable to political pressures (Kadenge and Chavunduka, 2019, Mujeyi, 2021). Also, ambiguity in roles and responsibilities arising from poor coordination and overlapping responsibilities is another limiting factor in land governance (Kadenge and Chavunduka, 2019; Manda and Banda, 2023; Kaponda, 2024). As such, there are high levels of corruption, lack of transparency and accountability within the land governance system in Zimbabwe (Chiweshe, 2021; Mujeyi, 2021; Chavunduka and Mazanhi, 2022). The lack of a coherent land policy in Zimbabwe exacerbates vulnerability of wetlands to inappropriate rural land use planning and management (Kadenge and Chavunduka, 2019).

WETLANDS GOVERNANCE AS A STRATEGIC APPROACH IN RURAL LAND USE PLANNING AND MANAGEMENT

Wetlands ecosystem services serve as LUFs through which land use planning and management can be framed. They determine or influence the type of activities people engage in to realise provisioning, cultural, supporting and regulating services. The kind of benefits or provisioning and supporting services derived from the Driefontein wetland in Zimbabwe, such as water and fertile soils, have largely influenced the livelihood options and the kind of activities that the local communities engage in to extract these benefits (Marambanyika *et al.*, 2021; Musasa and Marambanyika, 2022). In this regard, social processes such as governance, can be taken advantage of to make decisions that ensure a win-win situation for both the people and the environment. Governance, as a social process, can shape the environmental trajectory through its decision-making component, whether positively or negatively (Cash *et al.*, 2006, cited in de Oliveira *et al.*, 2024). Effective natural resource governance can enhance sustainable natural resource management and, protect the livelihoods of the people (Newaz and Rahman, 2019; Kakuba and Kanyamurwa, 2021). Effective wetlands governance can also foster sustainable management of wetland ecosystems (Tomaškinová *et al.*, 2021; Mohanty *et al.*, 2024). Wetlands provisioning services in rural areas largely influence livelihood options and the kinds of activities, in this case, land uses and management which people engage in to derive these benefits (Odaya, 2024).

Faced with the effects of climate change and socio-economic and environmental pressures, effective wetland governance in Zimbabwe presents several opportunities for rural land use planning and management (Musasa and Marambanyika, 2020). Rural land use planning and management seeks to enhance the sustainable management of natural resources (Liu 2018; Briassoulis 2019). Water resources in rural areas, including wetlands, influence livelihood options of the rural dwellers, thus the main livelihood sources in rural areas of Zimbabwe are water-dependent (Chikodzi, 2018; Musasa and Marambanyika, 2022). Therefore, effective wetlands governance can effectively support sustainable natural resource management in rural areas (Musasa and Marambanyika, 2020; Zebardast *et al.*, 2021). Stakeholders in wetlands governance can take advantage of their power and enact policies and laws that support optimal land use planning and management, while also ensuring sustainable wetland management (Donatus *et al.*, 2022; Campion *et al.*, 2024). This will not only benefit wetland ecosystems, but also the people and other aspects of the environment.

DISCUSSION

The findings of this review highlight the critical role of wetlands governance in addressing the challenges associated with rural land use planning and management in Zimbabwe. Despite the presence of legal and policy frameworks, such as the Environmental Management Act (Chapter 20:27) and the National Wetlands Policy, wetland degradation remains prevalent. The key themes emerging from the literature include aspects related to governance gaps, stakeholder participation and the potential for an integrated governance approach.

Governance gaps and policy fragmentation hinder effective wetlands management in Zimbabwe, as poor inter-agency coordination and sometimes top-down interference marginalise local communities despite their role as primary custodians (Mudapakati *et al.*, 2024). Rwodzi and Muzorewa (2023) highlight how elitist land ownership and class-based segregation, particularly in peri-urban areas, exacerbate land use mismanagement, with rural land barons operating beyond regulatory control. Authorities often selectively enforce environmental laws, legitimising developments based on influence, rather than sustainability, allowing the elite to encroach on wetlands while

marginalised communities face strict regulations. Addressing these challenges requires harmonising policies and strengthening institutional coordination to promote equitable and sustainable land use planning.

Evident in the discourse of land use management and wetlands governance is the growing land use conflicts and wetlands degradation. Literature has revealed that conflicting land uses pose a significant threat to wetlands in rural Zimbabwe. The increasing demand for agricultural land, coupled with urban expansion and mining activities (Chadambuka, 2025) has led to encroachments on wetland areas. The LUF framework suggests that sustainable land use planning should balance environmental protection with economic and social needs (Mahla, 2024). Given the above observations, implementing land zoning strategies that designate wetlands as protected areas, while promoting alternative livelihood strategies such as agroecology and ecotourism, can help mitigate these conflicts (Mabhaudhi *et al.*, 2014; Dorobantu and Nistoreanu, 2012).

Literature has demonstrated that the effectiveness of wetlands governance is closely tied to stakeholder participation, particularly the involvement of local communities. The CPR framework underscores the importance of participatory governance, where local communities play a central role in managing shared resources. However, current governance structures in Zimbabwe largely exclude these communities from decision-making processes (Masuke and Macheka, 2020; Tashu, 2024). Empowering communities through capacity-building initiatives, decentralised governance structures and legal recognition of community-based management systems can enhance wetland conservation efforts.

For wetlands governance to be effective, it must be embedded within broader rural land use planning frameworks. This requires a shift from reactive conservation approaches to proactive planning strategies that prioritise wetland sustainability. Developing landscape-scale management plans that incorporate wetland conservation objectives, climate adaptation strategies and multi-stakeholder governance mechanisms are essential for achieving long-term sustainability. Insights from the literature highlight the critical role of evidence-based planning and management in wetlands governance (Musasa *et*

al., 2025). Effective governance should be guided by scientific research and continuous monitoring, ensuring that data on wetland health, land use changes and socio-economic impacts inform policy development and adaptive management. Enhancing research collaborations among academic institutions, government agencies and local communities is essential for fostering evidence-based decision-making and improving the sustainability of wetland management practices.

CONCLUSION AND RECOMMENDATIONS

The article demonstrates that wetlands form the basis of livelihoods sources in rural areas, but less sustainable land use planning and management are posing detrimental impacts on wetland ecosystems. Thus, there is urgent need to look into the current wetland governance system in the country to address the gaps and challenges. Effective wetlands governance has the potential to enhance sustainable environmental management practices, hence it should be adopted as a strategic approach in rural land use planning and management. A clear understanding of the wetlands ecosystem services, the activities (land uses and management) required to derive the benefits and the related impacts to wetlands ecosystems is fundamental for the development of effective wetlands governance systems. Thus, there is a need to fully investigate the impacts of different land uses to wetlands in rural landscapes. This knowledge can serve as a basis for suitability analysis in terms of siting of different land uses in relation to wetland ecosystems. Optimal siting of different land uses with regards to their effects on wetland ecosystems will ensure effective wetland protection and conservation.

Inclusive decision-making is a key element of effective wetlands governance. To prioritise wetland protection and conservation, it is essential that all responsible stakeholders are actively involved in the decision-making process. This suggests that people in rural communities have an opportunity to actively participate in decision-making processes that affect wetlands ecosystems. However, achieving this requires stakeholders' realisation of the significance of wetlands ecosystems beyond the obvious provisioning services, as well as understanding of the impacts of different land uses in wetland ecosystems. Therefore, the article calls for community engagement via various means such as creation of an inclusive environment and establishing diverse

communication channels, amongst others. Stakeholder consultations, training programmes, workshops and awareness campaigns can be taken advantage of. This will ensure no stakeholder is left out and also empower diverse stakeholders while ensuring their opinions are heard and taken into consideration during the decision-making processes. It will also improve consensus among stakeholders, enhance effectiveness of wetlands governance systems and avoid conflicts that may arise due to diverse needs and perspectives regarding allocation of rural land use and management.

Furthermore, wetland governance should be integrated with broader environmental policies, such as climate change adaptation and biodiversity conservation, to effectively address the complex challenges affecting wetland ecosystems in rural Zimbabwe. The government also needs to put in place clearer legal statutes regarding wetlands governance and to be more explicit on the roles and responsibilities of stakeholders, especially local communities, involved in wetlands governance. This has the potential to minimise duplication of efforts, confusion and conflicts in wetlands governance. A firm hand is also required to enforce the legal statutes for optimal land use planning and management with regard to sustainable wetland management. At the same time, monitoring and evaluation mechanisms are also required to assess the effectiveness of implemented strategies regularly. This will ensure an effective wetland governance system that advocates sustainable rural land use planning and management to maximise the benefits derived from wetland ecosystems.

REFERENCES

Bonye, S.Z., Aasoglenang, T.A. and Yiridomoh, G.Y. (2020). Urbanisation, Agricultural Land Use Change and Livelihood Adaptation Strategies in Peri-Urban Wa, Ghana. *SN Social Sciences*, *1*(9), 1-23.

Briassoulis, H. (2019). Combating Land Degradation and Desertification: The Land-use Planning Quandary. *Land*, *8*(2), 1-27.

Campion, B.B., Nero, B.F. and Attipoe, E. (2024). We have the Laws But How is Our Environment? The Disconnect between Ghana's Environmental Commitments and Institutional Capacity to Manage Urban Floods and Wetlands. *Wetlands Ecology and Management*, *32*(5), 759-777.

Chadambuka, P. (2025) *Natural Resource-based Conflicts in Rural Zimbabwe*., Abingdon: Routledge.

Chavunduka, C. and Mazanhi, P. (2022). Developing Pro-poor Land Policy for Zimbabwe: The Role of Peri-urban Land Governance. *Journal of Urban Systems and Innovations for Resilience in Zimbabwe,* (1), 34 - 49

Chavunduka, C. and Tsikira, T.D. (2024) Public Land Management, Corruptionand and the Quest for Sustainable Secondary Cities in Zimbabwe. In: Matamanda, A.R., Chakwizira, J., Chatiza, K. and Nel, V. (eds.). *Secondary Cities and Local Governance in Southern Africa*, 115-134). Cham: Springer International Publishing.

Chigumira, E. (2018). Political Ecology of Agrarian Transformation: The Nexus of Mining and Agriculture in Sanyati District, Zimbabwe. *J. Rural Studies*, *61*, 265-276.

Chikodzi, D. (2018). Unusual Waterscapes and Precarious Rural Livelihoods: Occurrence, Utilisationand Conservation of Springs in the Save Catchment, Zimbabwe. Unpublished PhD Thesis. Available online: https://uwcscholar.uwc.ac.za/items/635dd6e2-44c0-4935-8836-7c7dd8bf0c9c

Chirisa, I., (2024). Wetlands Preservation in Urban Areas: The Quest for Resilience Building in Harare, Zimbabwe. In: Brears, R.C. (Ed.). *The Palgrave Encyclopedia of Sustainable Resources and Ecosystem Resilience*, (1-13). Cham: Springer International Publishing.

De Oliveira, M. *et al.* (2024). Governance of Coastal Wetlands: Beyond the Community Conservation Paradigm. *Ocean and Coastal Management*, *255*, 1-15.

Dixon, A., Wood, A. and Hailu, A. (2021). Wetlands in Ethiopia: Lessons from 20 Years of Research, Policy and Practice. *Wetlands*, *41*(20), 1-14.

Donatus, D. *et al.* (2022). The Management of Wetlands in Ghana as a Compliance to the Ramsar Convention. *J Marin Biol Aqua Res*, *2*(1), 1-19.

Dragomir, A.N. and Florescu, I. (2024). Challenges and Strategies for Implementing the Ramsar Convention. Balancing Economic Development and Wetland Conservation. *Studia Ecologiae Et Bioethicae*, *22*(4), 57-71.

Kadenge, P. and Chavunduka, C. (2019).. Land Governance in Zimbabwe. Land Governance in Southern Africa Symposium, September 2019.

Kakuba, S.J. and Kanyamurwa, J.M. (2021) Management of Wetlands and Livelihood Opportunities in Kinawataka Wetland, Kampala-Uganda. *Environmental Challenges*, *2*, 1-12.

Kaponda, T. (2024). Enhancing Rural Governance in Zimbabwe: Exploring the Significance of Inter-governmental Coordination in Facilitating Collaboration and Communication. In: Exploring Effective Municipal Planning and Implementation, 145-174). IGI Global.

Kudumba, B.T. (2022). Transforming Urban Policy to Combat Wetland Degradation in Harare. *Open Journal of Social Sciences*, *10*(11), 479-505.

Kripperndorff, K. (2004)/ *Content Analysis: An Introduction to Its Methodology*. London, Sage Publications.

Lee, J. (2018). The Governance of Wetland Ecosystems and the Promotion of Transboundary Water Cooperation-Opportunities Presented by the Ramsar Convention. In: Wouters, P., Nickum, J. E., & Patricia/Chen Wouters (Huipin). (eds.). *Transboundary Water Cooperation - Principles, Practice and Prospects for China and Its Neighbours*, 70-84). London: Routledge.

Liu, Y. (2018). Introduction to Land Use and Rural Sustainability in China. *Land Use Policy*, *74*, 1-4.

Mabhaudhi, T. *et al.* (2024). Prospective Impacts of Expanding Agroecological Transitions on Zimbabwe's Government's Socio-Economic and Environmental Agendas. Available online: https://cgspace.cgiar.org/server/api/core/bitstreams/2e70e1d0-827b-4c8d-99e3-218f799b1549/content

Macheka, M.T., Maharaj, P. and Nzima, D. (2021)/ Choosing between Environmental Conservation and Survival: Exploring the Link between Livelihoods and the Natural Environment in Rural Zimbabwe. *South African Geographical Journal*, *103*(3), 358-373.

Mahla, M. (2024) Developing a Framework for Sustainable Communal Management of Wetlands: A Case Study of Shurugwi District Ward 10, Midlands Province, Zimbabwe. *Journal for Business, Development and Leadership*, *1*, 2957-7136.

Manda, S. and Banda, L. (2023). Seeing Like the State? Customary Land Pressures and Fracturing Tenure Systems in Rural Zambia. *Land Use Policy, 132*, 1-10.

Mandal, M.H., Roy, A. and Siddique, G. (2021). Spatial Dynamics in People-Wetland Association: An Assessment of Rural Dependency on Ecosystem Services Extended by Purbasthali Wetland, West Bengal. *Environment, Development and Sustainability*, *23*(7), 10831-10852.

Masuku, S and Macheka, T. (2021). Policy Making and Governance Structures in Zimbabwe: Examining their Efficacy as a Conduit to Equitable Participation (Inclusion) and Social Justice for Rural Youths. *Cogent Social Sciences*, *7*(1), 1855742.

Masukwedza, G. I. *et al.* (2025). Characteristics and Atmospheric Drivers of Large-scale Agrometeorologically Relevant Dry Spells in Sub-Seasonal to Seasonal Timescales Over Zimbabwe. *Meteorological Applications*, *32*(2), E70039.

Marambanyika, T. *et al.* (2021). Local Perceptions oon thethe Impact of Drought on Wetland Ecosystem Services and Associated Household Livelihood Benefits: The Case of the Driefontein Ramsar Site in Zimbabwe. *Land, 10*(6), 1-19.

Matai, J., Chirisa, I. (2022). Spatial Planning Under the Impact of Urbanisation and Rural Transformation in Zimbabwe: A Review of Theories, Philosophiesand and Practices. In: Brears, R.C. (ed.) *The Palgrave Encyclopedia of Urban and Regional Futures*. Cham: Palgrave Macmillan. https://doi.org/10.1007/978-3-030-87745-3_351

Matamanda, A.R. *et al.* (2018). Harare's Deteriorating Wetlands: Why Sound Policies and Legislations are Not Enough. *Case Studies in the Environment*. Case Studies in the Environment, 2018, pps. 1–11. DOI: https://doi.org/10.1525/cse.2018.001198

Matamanda, A.R., Mafuku, S.H. and Bhanye, J.I. (2024). The Potential of Chinhoyi as a Fast-growing Secondary City in Addressing Urban Challenges in Zimbabwe. *Journal of Asian and African Studies*, *59*(5), 1408-1425.

Matamanda, A.R., Mafuku, S.H., Mangara, F. (2020). Informal Settlement Upgrading Strategies: The Zimbabwean Experience. In: Leal Filho, W. *et al.* (eds.) *Sustainable Cities and Communities. Encyclopedia of the UN Sustainable Development Goals*. Cham.: Springer, https://doi.org/10.1007/978-3-319-95717-3_8

Matsa, M., Mupepi, O. and Musasa, T. (2021). Spatio-temporal Analysis of Urban Area Expansion in Zimbabwe between 1990 and 2020: The Case of Gweru City. *Environmental Challenges*, *4*, 1-9.

Matsa, M., Musasa, T. and Mupepi, O. (2022) Loss of Urban Green Spaces due to Increased Land Use/Cover Changes between 2000-2019: The Case of Gweru City, Zimbabwe. *African Geographical Review*, *41*(4), 433-451.

Miah, M.G. *et al.* (2018). Land Use Functions Assessment for Sustainable Land Management: A Case Study in Barind Tract of Bangladesh. Available online: https://drive.google.com/file/d/1joVr1XpgBfkm4PUt0BfsZv5QS4dj-icO/view.

Mohanty, S. *et al.* (2024). Wetlands Contribution and Linkage to Support SDGs, its Indicators and Targets - A Critical Review. *Sustainable Development*, *32*(5), 5348-5392.

Mpala, T.A. (2021) Perspectives on Adaptation to Water Scarcity and Drought of Small-scale Farmers in Masvingo, Zimbabwe. Doctoral Dissertation, University of the Witwatersrand, Johannesburg, South Africa.

Mudapakati, C. P. *et al.* (2024)/ Peri-Urbanisation and Land Conflicts in Domboshava, Zimbabwe. *Land Use Policy*, *144*, 107222.

Mudombi, T.P. and Chigara, B. (2022). the Housing Provision and Environmental Protection Dilemma A Cause-Impact Analysis of Urban Housing Development on Harare's Wetlands. *Oikos: The Zimbabwe Ezekiel Guti University Bulletin of Ecology, Science Technology, Agriculture, Food Systems Review and Advancement*, *1*(1 and 2), 43-65.

Mujeyi, K. (2021) Land Corruption, Gender and Rural Land Governance in Zimbabwe. *African Journal of Land Policy and Geospatial Sciences*, *4*(1), 128-142.

Mukwashi, T., Munyavhi, A. and Hickonicko, B. (2024). Environmental Policy and the Quest to Preserve Natural Habitats including Wetlands under Climate Change and Variability in Zimbabwe. *Lighthouse: the Zimbabwe Ezekiel Guti University Journal of Law, Economics and Public Policy*, *3*(1 and 2), 16-33.

Musasa, T. and Marambanyika, T. (2022). The Nexus between Drivers of Wetland Utilisation Patterns, Land Use/Land Cover Change and Ecosystem Services in Two Wetlands, Zimbabwe. *Transactions of the Royal Society of South Africa*, *77*(2), 119-131.

Musasa, T. Mupepi, O. and Marambanyika, T. (2025). Wetlands of Zimbabwe: Biodiversity, Livelihoodsand and Conservation. In: Pullaiah, T. (ed.) *Wetlands of Tropical and Subtropical Asia and Africa: Biodiversity, Livelihoods and Conservation*, https://doi.org/10.1002/9781394235278.ch16

Mushore, T.D. *et al.* (2021) Climate Change Adaptation and Mitigation Strategies for Smallholder Farmers: A Case of Nyanga District in Zimbabwe. *Frontiers in Climate*, *3*, 1-10.

Mutonono, D.S., (2021). Who Owns the Land? Zimbabwean Traditional Leaders' Use of African Traditional Customs and Religion Contrasted with Biblical Approaches. *First Fruits Press Wilmore, Kentucky C2021*, 161-294.

Mwadzingeni, L., Mugandani, R. and Mafongoya, P. (2022) Risks of Climate Change on Future Water Supply in Smallholder Irrigation Schemes in Zimbabwe. *Water*, *14*(11), 1-20.

Mwonzora, G. (2022) Local Governance and Wetlands Management: A Tale of Harare City in Zimbabwe. *Urban Forum*, *33*(3), 309-328)

Nabikyu, J., Twine, E.E. and Dossou-Yovo, E.R. (2023). Ban on Rice Cultivation in Uganda's Wetlands: Implications for Household Income, Food Security, Gender Equity and Social Safety Nets in the Rainfed Lowland Areas of Amuria, Soroti and Katakwi Districts. https://hdl.handle.net/10568/134501

Ndemo, N., Magande, T. and Mphahlo, R. (2024). Rural Towns in Zimbabwe Urbanisation without Growth and Implications for Sustainability. *The Review of Rural Resilience Praxis*, *3*(1 and 2), 128-146.

Ndlovu, E., Prinsloo, B. and Le Roux, T., (2020), Impact of Climate Change and Variability on Traditional Farming Systems: Farmers' Perceptions from South-West, Semi-arid Zimbabwe. *Jàmbá: Journal of Disaster Risk Studies*, *12*(1), 1-19.

Newaz, M.W. and Rahman, S. (2019) Wetland Resource Governance in Bangladesh: An Analysis of Community-Based Co-Management Approach. *Environmental Development*, *32*, 1-12.

Nyambo, P. *et al.* (2024). Nature-based Solutions to Climate Change for Enhanced Nutrition, Foodand and Income Security of Rural Communities in Sub-Saharan Africa. In: Leal Filho *et al.* (eds.) *Handbook of Nature-based Solutions to Mitigation and Adaptation to Climate Change*. Cham.: Springer, https://doi.org/10.1007/978-3-030-98067-2_52-1

Nyamwasa, I. *et al.* (2018). Soil Insect Crop Pests and their Integrated Management in East Africa: A Review. *Crop Protection, 106*, 163-176.

Odaya, L. (2024) Important Functions of Wetlands in Local Communities in Kenya: A Case Study of Sio-River Wetland in Nambale Sub-County, Busia County. *East African Journal of Environment and Natural Resources*, *7*(1), 494-505.

Rwodzi, A.and Muzorewa, T. (2023). Land Resettlement and Elite Monopoly in Peri-Urban Harare: The Colonial Legacy of Land Ownership in Post-colonial Zimbabwe, 2000-2019. *Southern Journal for Contemporary History, 48*(1), 82-104. https://doi.org/10.38140/sjch.v48i1.6855

Sharai, S., Tawanda, T. and Gladman, C. (2020). Threats and Conservation Strategies on Urban Wetlands: A Case of Monavale and Surrounding Areas in Harare, Zimbabwe. *American Journal of Environmental Protection*, *9*(2), 36-43.

Sigauke, E. (2022). Rethinking Relationships with Nature: Human-Wetland Connections in Marlborough, Harare, Zimbabwe. Available online: https://open.uct.ac.za/bitstreams/d7577b7a-55ca-4b6c-b404-de1c434947b5/download

Sinthumule, N.I., Ratshivhadelo, T. and Nelwamondo, T. (2020). Stakeholder Perspectives on Land-Use Conflicts in the South African Section of the Greater Mapungubwe Transfrontier Conservation Area. *Journal of Land Use Science*, *15*(1), 11-24.

Song, M., Huntsinger, L. and Han, M. (2018). How Does the Ecological Well-being of Urban and Rural Residents Change with Rural-Urban Land Conversion? The Case of Hubei, China. *Sustainability*, *10*(2), 1-22.

Stroud, D.A. and Davidson, N.C. (2021). Fifty Years of Criteria Development for Selecting Wetlands of International Importance. *Marine and Freshwater Research*, *73*(10), 1134-1148.

Tashu, K. T. (2024). Assessing Devolution Gaps in Promoting Citizen Participation and Accountability in Local Government in Zimbabwe. *The Zimbabwe Journal of Business, Economics and Management*, *3*(1).

Thamaga, K.H., Dube, T. and Shoko, C. (2022). Advances in Satellite Remote Sensing of the Wetland Ecosystems in Sub-Saharan Africa. *Geocarto International*, *37*(20), 5891-5913.

Thapa, S. *et al.* (2020). Valuation of Ecosystem Services from an Important Wetland of Nepal: A Study from Begnas Watershed System. *Wetlands*, *40*, 1071-1083.

Tirivangasi, H.M. and Nyahunda, L. (2019) Challenges Faced by Rural People in Mitigating the Effects of Climate Change in the Mazungunye Communal Lands, Zimbabwe. *Jàmbá: Journal of Disaster Risk Studies*, *11*(1), 1-9.

Tomaškinová, J. *et al.* (2021). Addressing Present Challenges in the Life Cycle of Wetlands Management to Successfully Integrate Sustainability and Good Governance. *Journal of Environmental Engineering and Landscape Management*, *29*(1), 48-60.

World Bank (2020). Zimbabwe: Agriculture Sector Disaster Risk Assessment. World Bank: Washington, DC.

Ye, S. *et al.* (2022) Wetlands in China: Evolution, Carbon Sequestrations and Services, Threatsand and Preservation/Restoration. *Water*, *14*(7), 1-19.

Zebardast, L. *et al.* (2021). Sustainable Wetland Management through Bridging the Communication Gap between Conservation Projects and Local Communities. *Environment, Development and Sustainability*, *23*, 11098-11119.

Zou, Y. *et al.* (2018)/ Water Use Conflict between Wetland and Agriculture. *Journal of Environmental Management*, *224*, 140-146.