



Lighthouse

The Zimbabwe Ezekiel Guti University Journal of Law, Economics and Public Policy

ISSN 2957-8842 (Print)



Vol. 3 (Issues 1&2), 2024

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Published by the Zimbabwe Ezekiel Guti University Press
Stand No. 1901 Barrassie Road,
Off Shamva Road
P.O. Box 350
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Lighthouse: The Zimbabwe Ezekiel Guti University Journal of Law, Economics and Public Policy

ISSN 2957-884 2(Print)

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Environmental Policy and the Quest to Preserve Natural Habitats including Wetlands under Climate Change and Variability in Zimbabwe

TSUNGAI MUKWASHI¹, ARCHEFORD MUNYAVHI² AND BEATRICE HICKONICKO³

Abstract

Random changes in climate change constitute one of the major global environmental problems constraining economic development. The article argues that climate change has ceased to be a mere environmental issue and, to date, the issue has gained more traction as a human rights and developmental concept. Climate change directly and indirectly affects the enjoyment of most of human fundamental rights as provided for in the Constitution of Zimbabwe (2013) (hereinafter referred to as the Constitution) and international instruments. The existing mismatch in environmental policy frameworks is that of environmental policies versus the quest to preserve natural habitats, which mostly limit the enjoyment of other rights, being remote and, in some cases, the chain of causation appears very weak. Furthermore, the consequences of climate change exacerbate human suffering and affect the enjoyment of fundamental human rights and freedoms. The article seeks to address the major concern that while there is need to preserve natural habitats, including wetlands, societies and communities are in a war of priority, on whether development of wetlands should override preservation thereof. The article then provides that the Constitution of Zimbabwe contains many provisions which are aligned to the international legal framework on the protection of the right to a healthy and sustainable environment. The article then argues that in Zimbabwe, the law recognises the protection and conservation of

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wetlands, but the quest for development of these precious wetlands has resulted in fast-track disappearance of wetlands worsened by surprise changes in climate.

Keyword: enforcement, governance, global warming, legal framework

INTRODUCTION

An important danger to Zimbabwe's sustainable growth and environment is climate fluctuation and change. Twenty unusual climatic events and disasters have occurred over the centuries, affecting millions of people in various ways, according to a review of global climate changes since 1700 (Bronniman, 2015). As a result, over the years, study on comprehending and forecasting these interannual and multidecadal variations and changes in climate and the ensuing impacts has grown critically important and active worldwide. This article examines local and national responses to climate change, with a particular focus on environmental policy and the fight to preserve natural habitats, including wetlands, under climate change and variability in Zimbabwe. It does this by drawing on the experiences and insights of civil society organisations working on climate change in Zimbabwe (as coordinated through the Civil Society Climate Change Working Group). A series of recommendations targeted primarily at development practitioners and policy-makers interested in promoting more successful adaptation initiatives that consider the needs and priorities of vulnerable individuals, households and communities are included in the briefing's conclusion. These demand a larger emphasis on urban vulnerability and more participation of civil society in the formulation of national policy.

STUDY OVERVIEW

Wetlands are among the many natural resources that Zimbabwe is endowed with. They occupy 11 717.4 km², or 3% of the total area (Chanza, 2017). Mutandwa (2021) has argued that a mere 21% of the wetlands that are available are stable, compared to 18% that are

highly deteriorated and 61% that are moderately degraded. This does not include the 652 151 hectares of reservoirs, dams and impoundments, nor the more than 5 700 km of permanent rivers and streams (*ibid.*). It is imperative to observe that there is great deterioration of wetlands owing to poor management and use thereof. There are two types of wetlands in the nation: man-made wetlands that are products of water redirected to specific areas and inland wetlands that are products of natural phenomenon. Inland wetlands, found in agro-ecological Natural Regions I through V, tend to diminish when mean annual rainfall declines.

There are significant financial, social and ecological costs associated with the disturbance of wetland functions. Gray *et al.* (2016) attest that the delivery of ecological goods and services may be impacted by the disruption of their natural equilibrium. It is imperative to stop disturbing important wetlands, preserve the diversity of the wetlands that remain and try rehabilitation, restoration and re-creation of wetlands when feasible. They further allege that wetlands that are subjected to unsustainable agricultural practices greatly harm the ecology. Agriculture-related high impact activities include extracting irrigation water, especially on a commercial scale; grazing large and small animals; altering the water flow and soil structure; introducing inappropriate plants and invasive alien species, such as flowers and other ornamental plants; and planting forests with high transpiration rates of trees.

Additionally, construction operations within or near wetlands have an immediate adverse impact on them, as does construction on nearby properties that has an indirect impact. Compaction of the wetlands is caused by increased activity, such as construction and settlement. Wetlands are also adversely affected by mining activities. Significant environmental changes are the outcome of mining operations on wetlands. These changes rely on the kind of mineral being extracted, the mining techniques used, and the topography being worked.

Madebwe and Madebwe (2005) highlights that the removal of natural vegetation cover and topsoil, the exposure of large areas of bare rock surface, the creation of open pits, quarries and spoil depressions that may fill through seepage, the creation of large areas of physically unstable and seeping spoil piles, accelerated runoff, significantly increased erosion and other topographical effects of mineral extraction on wetlands.

Mugambiwa (2018) projects that mineral extraction has several physical effects on wetlands, such as drainage of wetland areas, filling of wetlands with spoil, widening of stream beds, altering stream courses through impoundment and diversion, increased turbidity and silt load and a decrease in light penetration and diversity of wetland habitats. Mineral extraction has chemical consequences on wetlands that include raising the salt content of the wetland, decreasing pH and reducing free oxygen levels, in addition to adding new chemical elements to the wetland environment. Major chemical impacts of mineral extraction on wetlands include pacing of heavy metals into solution and contamination of ground water aquifers. Zimbabwe's climate is already changing, as evidenced by meteorological records that show more erratic rainfall and more frequent and severe extreme weather events (such as floods and droughts) (Gray *et al.*, 2016). Due to its strong reliance on rain-fed agriculture and climate-sensitive resources, Zimbabwe is particularly vulnerable to climate unpredictability and change that will affect huge portions of sub-Saharan Africa.

METHODOLOGY

This article provides a comprehensive overview of the ways in which wetlands and natural habitats are impacted by climate variability and change. Using specialised websites and academic journal databases, a search of both academic and grey literature was conducted. The distribution and volume of data about the impacts of climate variability and change on wetlands is summed up qualitatively, visually and through a narrative assessment.

LITERATURE REVIEW

Science has unequivocally shown that action must be taken immediately to prevent irreversible harm to the world. According to Inter-Governmental Panel on Climate Change (IPCC, 2023) reports, the effects of climate change would be most severe in Africa. Wetlands are defined as "...areas of marsh, fen, peat-land, or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish, or salt, including riparian land adjacent" in section 2 of the Environmental Management Act [Chapter 20:27]. The continent is gravely underdeveloped indicating a high susceptibility to the effects of climate change.

Wetlands are valuable natural resources that offer a multitude of benefits, including water supply, stream flow regulation, erosion and flood mitigation, improved water quality, biodiversity preservation, products (fish, grazing, building materials), cultural features, tourism and recreation, preservation of natural processes and mitigation of climate change (Murambanyika *et al.*, 2023). The best terrestrial habitats for storing carbon are wetlands, particularly peatlands. Peatlands make about 50% of all wetlands and the carbon in their peat is equivalent to that in the atmosphere and all the world's forest biomass combined (Grundling, 1999). For millennia, they have absorbed and retained carbon from the atmosphere. One significant and expanding source of greenhouse gas (gasses that trap heat in the atmosphere, such carbon dioxide, methane and nutritious oxide resulting in unusual weather patterns) emissions is the degradation of peatlands. A tenth (10%) of the carbon dioxide emissions from fossil fuels worldwide are thought to come from peatland drainage, fires and exploitation (*ibid.*). This demonstrates how important wetlands are for controlling atmospheric processes and providing a means of subsistence and food security, particularly in rural areas.

Due to the worldwide scope of climate change, there needs to be maximum collaboration and involvement in an appropriate and successful international response that includes mitigation and

adaptation strategies founded in the principles of the Climate Change Convention. The wetland policy, the Environmental Management Act and the constitution – the legislative measures implemented to manage climate change and variability – were the subjects of the literature review.

CLIMATE CHANGE AND VARIABILITY ON NATURAL HABITATS AND WETLANDS

One of the greatest risks to global development is climate change, to which developing nations are especially vulnerable because of their limited ability to adapt owing to their historical and socio-economic vulnerabilities (Odaya *et al.*, 2023). It is commonly acknowledged that climate change is a real phenomenon with grave implications for the social, political, economic and environmental spheres, especially for those nations which are most vulnerable (Fredrick, 2017). Zimbabwe's progress is anticipated to be severely halted by the effects of climate change which also seriously jeopardise the nation's ability to adapt and provide food security (Ansoms, 2013). Among the procedures that aimed to create guidelines for addressing climate change concerns, determining the scope of the threat and implementing targeted measures to mitigate any effects was the National Climate Change Response Strategy.

Wetlands are being lost and degraded globally and the process appears to be moving more quickly than in other ecosystems. Millennium Ecosystem Assessment (2005) noted that freshwater species included in the Living Planet Index saw an average 50% reduction in population between 1970 and 2000, whereas marine and other terrestrial species saw an average 30% decline. More notable than the effects directly linked to climate change over the past century have been non-climatic direct anthropogenic impacts (effects of human activity on the environment) (Scavia *et al.*, 2002). The main non-climatic effects are sewage discharge, land reclamation and deforestation, eutrophication, pollution, overharvesting and overexploitation, drainage of wetlands, water withdrawal and the introduction of invasive alien species (IAS). Due to the intricate

interactions and feedback between wetlands and climate, and the potential synergistic impacts of both climatic and non-climatic factors, it is anticipated that climate change will accelerate the deterioration and loss of many wetlands. The possibility of rapid changes in wetlands that can be vast in magnitude and difficult, expensive, or impossible to restore, is widely considered to rise with global warming (Millennium Ecosystem Assessment, 2005).

PRESERVATION OF HABITATS AND WETLANDS

Eleven national acts are administered and enforced by Zimbabwe's Ministry of Environment and Tourism. There are several environmental acts that are outside this ministry's jurisdiction, and some of these have only tangential connections to environmental protection (Gore, 2020). Environmental protection is the responsibility of six other ministries. Numerous reasons could have contributed to the creation of this general administrative framework. It is possible that Zimbabwean authorities think a wide range of regulations is the best way to handle environmental challenges. As a matter of practical concern, funding – both local and foreign – may be allocated, particularly towards certain areas of interest. Therefore, it would make sense to maintain a wide distribution of environmental legislation.

On the other hand, Zimbabwe might not fully grasp the risks to the state of its environment. It is more likely, though, that Zimbabwe will lack the political will necessary to establish an extensive, highly centralised bureaucracy to handle all the environmental issues facing the nation. Zimbabwe has repeatedly shown that environmental concerns cannot be managed in a vacuum and instead call for an examination of the effects they have on the political, social, cultural, economic and health of people (Bowonder, 1985). Accordingly, government authorities may feel that the creation of one dominant mechanism or bureaucracy would require the sacrifice of these important considerations.

Chapoto (2017) posits that the risk management for disasters is closely related to climate change adaptation. Now, the Ministry of Local Government, Public Works and National Housing oversees disaster risk management and rural and urban councils, while the Ministry of Environment, Water and Climate oversees climate change. They might, nevertheless, both make use of the same platforms and coordinating tools. One example of a decentralised system for coordinating national, provincial and community-level disaster risk management initiatives is the Department of Civil Protection's Disaster Risk Management division. The utilisation of these structural arrangements by climate change governance institutions could yield greater benefits for all parties involved.

LAW AND POLICY ON CLIMATE CHANGE AND VARIABILITY

Since 1992, Zimbabwe has taken an active position in international climate change negotiations. It was one of the first nations to agree to the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and to sign the Kyoto Protocol in 2009. Even though Zimbabwe lacks the institutional, financial and human resources necessary to implement effective climate change response measures, the country has persistently supported UN efforts to halt the rise in greenhouse gas (GHG) emissions over the years (Mandishona *et al.*, 2019).

Zimbabwe has 453 828 acres of land designated as seven wetland habitats of international importance (Ramsar Convention, 2020). Section 73 of the Constitution, the Environmental Management Act and the Environmental Impact Assessment and Ecosystems Protection Regulations all provide protection for these wetland sites. Zimbabwe is a party to the global intergovernmental Ramsar Convention that establishes the guidelines for both domestic and international action aimed at conserving wetlands and their resources. Wetlands are defined as "...areas of marsh, fen, peat-land, or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish, or salt, including riparian land

adjacent" in section 2 of the Environmental Management Act in accordance with the Ramsar Convention.

Zimbabwe is required by the Ramsar Treaty to preserve wetlands that serve as carbon sinks, flood controls, sponges and water storage facilities for streams and dams. Human activity is causing Zimbabwe's wetlands to disappear despite the country's adherence to the provisions of the Ramsar Treaty. Wetland areas are being developed into residential areas, parts of these regions are now bustling with commercial activity, with housing developments, service stations and other business-related amenities taking over (McCaffrey, 2001). Thirty wetlands are threatened by unauthorised settlements in Harare alone (UNDP, 2018). Wetlands were lost in Shurugwi District at a rate of 0.6% on average every annum. (Madebwe *et al.*, 2005)

The Environmental Management Agency (EMA) assisted in the creation of a Draft Wetland Policy as a response to this devastation of wetlands. The purpose of this policy is to create an institutional and legal framework that is both efficient and effective for the integrated management and wise use of wetlands. This framework will allow for the participation of all stakeholders and preserve the values and functions derived from wetlands, protecting biological diversity and improving the quality of life for Zimbabweans. Additionally, the policy aims to strengthen capacity-building within relevant institutions involved in wetlands management. Although the Wetlands Policy has extremely noble goals, it must be operating in a difficult environment where good policies are created but not carried out.

Furthermore, a careful examination of the surrounding circumstances suggests that the loss of wetlands may be a sign of a more serious problem with governance that affects the efficient and responsible management of urban property (Odaya *et al.*, 2022). Evidence also suggests that factors including rising food insecurity and climate change have impeded the successful implementation of current laws and policies aimed at environmental preservation and sustainability

in most sub-Saharan African countries (Gao, *et al.*, 2018). They further state, therefore, wetlands protection in Zimbabwe has difficult governance issues despite this extremely noble aim, including a weak housing policy, changes in land use patterns, land corruption and growing pressure on land due to urban farming and urbanisation.

The Africa Institute for Environmental Law (AIEL), a research division of the Zimbabwe Environmental Law Association (ZELA), in partnership with the Bulawayo Progressive Residents Association (BUPRA), organised a Policy Dialogue on the Draft Wetlands Policy in recognition of the intricate obstacles facing wetlands protections. Developing suggestions on how to improve the Draft Wetlands Policy was the main goal of the discussion (Du Plessis, 2011). City developers, resident trusts, local government agencies, civil society organisations (CSOs) and development partners were among the participants in the discussion.

Wetland ecosystem services were estimated to be worth at least US\$14.9 trillion annually (45% of the global total) in 1997 by Costanza *et al.* (2014), who revised their 1997 estimates on the contribution of wetlands (both inland and coastal) to the global monetary value of the ecosystem services of natural biomes. Based on updated biome area data and more thorough estimates of unit (per hectare) monetary values, primarily from de Groot *et al.* (2012), Costanza *et al.* (2014) updated these figures. They estimated that the minimum monetary value of natural wetland ecosystem services, updated to 2011 values, is US\$50.7 trillion annually, or 41% of the global total across all biomes. Key economic plans like the National Development Strategy 1 (NDS1) should acknowledge this economic worth. Beyond this, it became clear that Zimbabwe's commitment to reducing climate change should also be the driving force behind the need to protect and restore wetlands (Chimenya *et al.*, 2024). Chimenya (*ibid.*) also states that wetlands absorb carbon dioxide from the atmosphere that is thought to hold 500-700 gigatons of carbon and they act as carbon storage reservoirs on earth. During dry spells, wetlands control the amount and time of water release. Because wetlands act as buffers and flood storage during floods, their destruction will cause the release of three main gases that trap heat: carbon dioxide, methane and nitrous oxide.

It became apparent that despite the critical role local governments should play in protecting wetlands, some of them pay little attention to environmental regulations and occasionally development moves forward right under their noses even when it does so in violation of such regulations (Buweringwe and Dewa, 2024). To effectively protect wetlands in Zimbabwe, local authorities, EMA and communities should work together. The inability of court officials to effectively safeguard wetlands and the environment is another issue. According to data from EMA, almost 70% of magistrates and other court employees did not undergo environmental law courses (Chimenya *et al.*, 2024). Just two of the six Harare magistrates completed an environmental law subject. The lack of environmental courts in Zimbabwe exacerbates the under appreciation of environmental law. This is among the justifications offered by ZELA and EMA for their advocacy of the creation of environmental courts. It was suggested that to guarantee that court officials have better understanding and awareness of environmental legislation, environmental protection and sustainability principles, AIEL, EMA and other important actors are required.

The protected areas information will be provided via this system. Chimenya (*ibid.*) continued by saying that policy harmonisation is also necessary to conserve wetlands. The housing, agriculture and climate change policies are just a few of these policies. The discussion revealed that the creation of wetlands maps which local governments will use to guide their land use plans, is essential to the protection of wetlands.

THE NEXUS BETWEEN CLIMATE CHANGE AND ENVIRONMENTAL RIGHTS FROM A HUMAN RIGHTS PERSPECTIVE

Section 73 of the Constitution enshrines the right of every person to an environment that is not harmful to their health or wellbeing and to have the environment protected for the benefit of present and future generations through legislative and other measures that prevent pollution and ecological degradation, promote conservation

and secure ecologically sustainable development and use of natural resources while promoting economic and social development. This constitutional provision recognises the link between the environment and the enjoyment of the right to health. In addition to this provision, the Constitution also now enshrines the right to health care services. Section 76 guarantees to every citizen and permanent resident of Zimbabwe the right to have access to basic health care services, including reproductive health services. The state is mandated to take reasonable legislative and other measures, within the limits of the resources available to it, to achieve the progressive realisation of environmental and health rights.

a) THE RIGHT TO AN ENVIRONMENT NOT HARMFUL TO HEALTH OR WELL-BEING

This right is provided for by section 73(1) (a) of the Constitution which states that every person has a right to an environment that is not harmful to their health or wellbeing. This provision entrenches two interrelated rights, namely the right to an environment that is not harmful to human health and, secondly, the right that is not harmful to people's wellbeing. These rights revolve around the term 'environment' which is not defined in the Constitution. It is also argued that it is not the duty of the Constitution to expressly define the term as defining it itself will lead to future term disputes. It is beyond doubt that the term 'health' relates to human health and incorporates both psychological and physical integrity. To this end, the World Health Organisation (WHO) widely defines health as a state of complete physical, mental and social wellbeing (WHO Constitution Preamble, 1945). The protection of a right to a healthy environment is particularly important for groups that are socio economically marginalised and rely on the natural environment for necessities of life (Kidd ,1997).

In addition, health needs are predominately physical in nature and constitute the core requirements for individuals not only to stay alive, but also to possess physical health or wellbeing (Doyal and Gough, 1991). It cannot be disputed that humans cannot survive

without food and water, two key needs which are substantially negatively affected by climate change. Similarly, every person should avoid situations that may expose them to physical harm, i.e. injury to or death, including contracting diseases. As a result, climate change negatively impacts food security and may lead to the rise of nutrition-related diseases, thereby affecting the wellbeing of hundreds of millions across the globe.

b) THE RIGHT TO HAVE THE ENVIRONMENT PROTECTED FOR THE BENEFIT OF PRESENT AND FUTURE GENERATIONS

In terms of section 73(1)(b) of the Constitution, it is every person's right to have the environment protected for the benefit of the present and future generations. This provision acknowledges that as a developing country, Zimbabwe needs to meet the demands of social transformation and economic growth while simultaneously expediting its ability to compete in regional and global markets in an environmentally sustainable manner. As such, the Constitution recognises that the country will inevitably embark on development programmes to improve its capacity to meet the present and future generations. The individual right to a satisfactory environment cannot be severed from the collective or individual right to economic development (Ksentini, 1995). From the perspective of the United Nations Sustainable Development Goals (SDGs), the country should strive to create an environment that eradicates poverty and hunger while at the same time ensuring environmental sustainability (SDGs goal).

c) THE DUTY TO ADOPT MEASURES THAT SECURE ECOLOGICALLY SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES

It is the state's duty to adopt measures to secure ecologically sustainable development grounds, not only in a fair share of the natural resources, but also to demand that the state ensures that the present generation does not use the resources to the detriment of future generations. In developing countries like Angola, Ghana and Zambia, most of the debates relating to climate change mitigation

and human rights arise in the context of the state's duty to adopt measures that secure ecologically sustainable development and use of natural resources while promoting economic and social development.

d) CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN AND CLIMATE CHANGE

The Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) does not address climate change specifically and directly. However, the obligation of the state in relation to climate change is articulated in General Recommendation No. 37 on gender-related dimensions of disaster risk-reduction in the context of climate change. Women, girls, men and boys are affected differently by climate change and disasters, with many women and girls experiencing greater risks, burdens and impacts. Situations of crises exacerbate pre-existing gender inequalities and also compound intersecting forms of discrimination against, *inter alia*, women living in poverty, indigenous women, women belonging to ethnic, racial, religious and sexual minorities, women with disabilities, migrant women, rural women and elderly women, who are often affected disproportionately compared to men and other women.

CONCLUSION AND RECOMMENDATIONS

Generally, national human institutions such as the Zimbabwe Human Rights Commission (ZHRC) are mandated to protect and promote human rights, including environmental rights. In terms of section 243(1)(b) of the Constitution, the ZHRC is mandated to promote the protection, development and attainment of human rights and freedoms. The article has suggested that the ZHRC should be more open to emerging human rights issues such as business and human rights, sustainable development goals and climate change. This is so because the ZHRC is authorised to receive and consider complaints from the public to act for any lead to a human rights question or likely infringement. Hence, the ZHRC and other independent institutions (Chapter 12 of the Constitution) can entertain and handle

complaints alleging that certain actions of state and non-state actors infringe upon any of the fundamental rights and freedoms protected by Constitution. EMA, if it is equipped with the necessary functional autonomy and adequate fiscal resources for the implementation of its institutional mandate, can perform a pivotal function in combating climate change and its impact on the enjoyment of human rights. The Environmental Management Act has been hailed for its promotion of environmental rights. The Act is not aligned to the Constitution to the extent of expressly providing for the right to safe, clean and potable water. The article has shown that section 4(1) of the Environmental Management Act implies protection of the right to water as it provides for environmental rights in their diversity. The EMA has the duty to promote public environmental education and awareness and the sharing of knowledge to increase the capacity of communities to address environmental issues and engender value, attitudes, skills and behaviour consistent with environmental management.

Zimbabwe should consider the multi-layered structure of adaptation policy and programming as it develops its framework for dealing with climate change. This will ensure that the needs of the population most affected by policy and investment decisions are taken into consideration. The country must take inspiration from the adaptation planning techniques used by other extremely susceptible nations, such as the Least Developed Nations. It is necessary to investigate how new adaptation funds, such as the UNFCCC Adaptation Fund, might assist creative projects and initiatives, such as capacity-building and to create systems that increase donors' trust that money will be used wisely to benefit wetlands and natural habitat restoration. It is also important to re-evaluate the characteristics of vulnerability that impact communities in both rural and urban areas to make sure that adaptation programming is tailored to the requirements of the most vulnerable individuals in various settings and provide policy frameworks that acknowledge the distinct and complementary approaches for urban and rural growth and adaptation.

There is an inherent nexus or enmeshment between climate change, human rights and general interpretation of environmental policies. There is limited public understanding and appreciation of the actual or potential human rights impacts of climate change, including the nature and scope of rights. The existing environmental and climate change legislation is not adequate or suitable for protecting human rights in the face of climate change displacements. State institutions, like the Zimbabwean judiciary, may not be ready or adequately capacitated to deal with human rights cases occasioned by climate change, hence are not ready to protect, promote and remedy rights through administrative enforcement measures. The gap or conflict that should be attended to is whether conservation natural habitats, including wetlands, should have greater significant consideration than using them for development. In as much as Zimbabwe's geographical map shows that wetlands occupy less than 5% of the total land, there is need for tripartite negotiations from all institutions, the state, human rights commissions, environmental agencies, police force and the members of the public to join hands so that preservation of natural habitans, including wetlands, should be greatly recognised. This will require a call for a new environmental bill encompassing areas where the existing laws are silent on the progressive protection of natural habitats under random changes in climate change.

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