

**BINDURA UNIVERSITY OF SCIENCE EDUCATION  
DEPARTMENT OF NATURAL RESOURCES MANAGEMENT**

**THE EFFICACY OF COLLABORATION AMONG GOVERNMENT INSTITUTIONS  
IN LAND USE PLANNING FOR WETLAND CONSERVATION IN BINDURA,  
MASHONALAND CENTRAL PROVINCE, ZIMBABWE**



**BY**

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## DECLARATION

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### Approval

This research project has been submitted with my consent as supervisor

Signed Neil Mandinyeya Zhou

Date 05/06/2025

## **DEDICATION**

I dedicate this research to my family. To my parents whose unwavering support carried me through school despite the challenges we faced. I am truly amazed that you brought me this far under such tough circumstances. This achievement is for you, Mom and Dad, none of this would have been possible without you.

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## ABSTRACT

Zimbabwe has several government institutions addressing different aspects of wetland conservation. However, the effectiveness of environmental planning and management of these wetlands is greatly undermined by insufficient collaboration among these government institutions involved in land use planning for wetland conservation, including the Environmental Management Agency (EMA) and the urban councils. Although, the issue is acknowledged in Zimbabwe, there is a notable lack of research focused on collaboration efforts to address wetland degradation. This study seeks to examine the level of collaboration among these government agencies in the context of land use planning for wetlands while also identifying challenges and potential areas for improvement. Using the case study of Bindura urban, Zimbabwe, purposive sampling was applied to target relevant government institutions involved in land use planning for wetland conservation, including Environmental Management Agency (EMA), Bindura Municipality, Department of Physical Planning, Ministry of Mines and Mining Development, Land Management and Administration Department under the Ministry of Lands, Agriculture, Fisheries, Water and Rural Resettlement, Department of Agricultural, Technical and Extension Service (AGRITEX), Zimbabwe National Water Authority (ZINWA), Forest Commission, Upper Ruya Sub-catchment council and Middle Mazowe Sub-catchment council. The data was primarily collected through questionnaires. Findings indicate a moderate and inconsistent collaboration among these government institutions, primarily affected by political interference and resource limitations. Nevertheless, opportunities exist to enhance collaboration by establishing formal frameworks and improving communication strategies. By addressing these challenges, through critical strategies that encompass both socio-economic and environmental aspects of land use planning for wetlands, we can maximize existing opportunities. This approach will enable the government institutions to shift towards a more effective wetland conservation and sustainable land use planning.

**KEY WORDS:** Land Use Planning, Wetland Conservation, Sustainable, Collaboration, Government institutions, Bindura, Zimbabwe

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## LIST OF ACRONYMS AND ABBREVIATION

|               |                                                              |
|---------------|--------------------------------------------------------------|
| AGRITEX ..... | Department of Agricultural, Technical and Extension Services |
| CBD .....     | Central Bussiness District                                   |
| CEQ.....      | Council on Environmental Quality                             |
| EIA .....     | Environmental Impact Assessment                              |
| EMA.....      | Environmental Management Agency                              |
| GS .....      | Grassland Savanna                                            |
| LEAPs .....   | Local Environmental Action Plans                             |
| LUP .....     | Land Use Planning                                            |
| NGO.....      | Non- Governmnetal Organisation                               |
| SPSS.....     | Statistical Package for Social Sciences                      |
| TBS .....     | Tree Bush Savanna                                            |
| TS.....       | Tree Savanna                                                 |
| UN.....       | United Nations                                               |
| UNDP.....     | United Nations Development Programme                         |
| WRB .....     | World Reference Base                                         |
| WWT.....      | Wildfowl and Wetland Trust                                   |
| ZELA .....    | Zimbabwe Environmental Law Association                       |
| ZINWA.....    | Zimbabwe National Water Authority                            |

# CHAPTER 1

## INTRODUCTION

### 1.0 INTRODUCTION

The traditional definitions of land use planning depict it as a systematic process intended to manage the future use and development of land (Baker, 2014). Baker, 2014 also commented that land use planning is one of many terms (e.g. town planning, city planning, county planning and environment planning) which involves the use of public policy to manage and regulate land use with aim to balance efficiency, sustainability and ethics. Land use practices are the primary causes of environmental problems such as wetland degradation thus the need for wetland planning with the consideration of environmental concerns in mind. Unfortunately, despite the severity of wetland degradation of urban wetlands in Africa, they have been largely neglected in urban plans by the urban planners.

(Nyikadzino, 2016) commented in his research that it has been noted that there is inadequate coordination and collaboration between the government institutions responsible for the well-being of the environment. This has been one of the causes for the continued degradation of wetlands thus the purpose of this research is to look into the coordination and collaboration between governments agencies involved in wetland protection through land use planning per the government officer's perspective.

### 1.2 BACKGROUND

Wetlands are most affected by inappropriate land use especially in an urban setting. The urban population of Zimbabwe continues to grow annually by about 2% (UNDP, 2020). This has resulted in the local authorities being unable to adjust to the increase in demand for housing and water as the population increases. The demand for housing has threatened wetland areas. In Bindura, hundreds of houses are built on wetland areas, in Chipadze, Clusters residential area and the area around the railway line just after the CBD, alone excluding other parts of Bindura as well, a situation also observed by Kadziya Lizias and Chikosha Felix in 2013. This comes at a time when Bindura, like most parts of Zimbabwe is facing increased frequency of droughts resulting in a surge in wetland cultivation as well as illegal mining. More and more people are looking for alternatives to make a living because agriculture is no longer a viable option to the common folk. The 2024 heat wave of December

which swept across southern Africa is a wakeup call to the importance of wetlands as temperatures rose up to 44 degrees in some parts of Zimbabwe thus making land use planning for wetlands needed more than ever before.

However, effective land use planning and implementation with the consideration of wetlands is threatened by the lack of collaboration between government departments and agencies. Zimbabwe has a plural of these government departments and agencies involved in different aspects of the planning and implementation for wetlands which has done more harm than good as this for the most part has resulted in blurred obligations and responsibilities towards these fragile ecosystems ([Mwonzora, 2021](#)).

It is against this background that there is indeed a need to understand the relationship between the government agencies involved in land use planning for the conservation of wetlands as to maximize the benefits that come with having multiplicity in land use planning for wetlands whilst reducing the negatives which have been a set-back in effective planning, implementation and management of natural resources as a whole.

### **1.3 STATEMENT OF THE PROBLEM**

The effectiveness of environmental planning and management with to wetlands is hindered by inadequate collaboration among the government institutions involved in land use planning and wetland conservation such as the Environmental Management Agency (EMA) and the urban councils. Despite this being a challenge recognized in Zimbabwe, research on collaborative efforts to reduce the impact of environmental degradation and wetland extinction remains scarce.

### **1.4 OBJECTIVES**

The major objectives of this study are threefold:

- 1.4.1.** To assess the current level of collaboration for wetland conservation between government agencies involved in land use planning.
- 1.4.2.** To identify challenges experienced by government agencies in collaborating land use planning and the implementing efforts for wetlands management.
- 1.4.3.** To explore opportunities for improving collaboration among government agencies for wetlands planning and management.

## **1.5 RESEARCH QUESTIONS**

In order to achieve the above objectives, the following research questions were formulated

**1.5.1.** What is the current level of collaboration between government agencies responsible for land use planning and wetland conservation?

**1.5.2.** What are the major challenges faced by government agencies in collaborating land use planning and implementation efforts for wetlands conservation?

**1.5.3.** What opportunities exists for improving collaboration among the agencies?

## **1.6 SIGNIFICANCE OF RESEARCH**

There has been inadequate research effort and studies of government institutions involved in wetland management and conservation here in Zimbabwe. This study is necessary to establish the importance of land use planning for wetland conservation to improve the production potential of this resource.

## CHAPTER 2

### REVIEW OF RELATED LITERATURE

#### 2.1 INTRODUCTION

Wetlands are any area of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and includes marine waters, depth does not exceed six meters. They are important for water purification, water storage, flood prevention, control and provision of habitat. However, wetlands face a significant threat due to inappropriate land uses as a result of anthropogenic activities. They are being lost three times as fast as forest, which is very concerning ([UN Climate Change News, 2018](#)). Within the period of 1970 – 2015, 35 % of the world's wetlands were lost ([UN Climate Change News, 2018](#)). Zimbabwe is not an exception because it has also lost half of its wetlands between 1980 and 2020 ([ZELA, 2022](#)). According to the second draft of the [National guidelines for the management and conservation of wetland ecosystems in Zimbabwe, 2020](#), wetlands cover 3 % of the land. Of this portion, 18% is severely degraded and 61 % are moderately degraded. From this situation therefore, the majority of wetlands continue to be prone to degradation unless measures are taken to protect them.

Collaboration becomes a necessary process in which different parties examine various facets of a problem and seek solutions that extend beyond their narrow definitions of what is feasible ([Hofman and Stafford, 2002](#)). The existing literature on concerned efforts to protect urban wetlands from deterioration highlights the lack of inter-agency collaboration among the government agencies responsible for land use planning in wetland protection. This review seeks to establish this collaboration gap in order to find a possible solution to the problem of inadequate coordination between institutions. It explores the current state of collaboration and challenges met by the government departments and examine possible opportunities in land use planning for wetlands.

## **2.2 LACK OF INTER-AGENCY COLLABORATION FOR LUP AND WETLAND PROTECTION IN ZIMBABWE**

The nature and characteristics of wetlands are very diverse and varied ([Chakraborty, Sanyal, Ray, 2023](#)) and therefore management and conservation of these areas would necessary require an inter-disciplinary and holistic approach. Coordinated and collaborative efforts from natural resources related government institutions is pivotal to the successful conservation and protection of wetlands. It is apparent that collaboration among the government agencies involved in natural resources management and planning in Zimbabwe has been a long-standing issue, spanning decades. The [Plan Afric report](#) published in 2000, highlighted that the presence of multiple agencies creates challenges for planning and implementation as this fragmentation often leads to conflicting policies, priorities, duplicated efforts and the failure to share information and resources. Decades later, this challenge still persists as shown in the [Auditor-General's value of money audit report](#) of 2021 on the management of wetlands by EMA which was presented to the parliament of Zimbabwe. In this report, it is noted that one of the reasons for the continued degradation of wetlands is due to insufficient collaboration with the other state agencies, indicating that there was little support and participation between the Environmental Management Agency (EMA) and the other agencies which poses a challenge to effective inter-agency collaboration.

## **2.3 BARRIERS AGAINST EFFECTIVE INTER-AGENCY COLLABORATION**

In urban areas of Zimbabwe, wetlands are extremely vulnerable to unsustainable land use practices and are often excluded from city planning. This is exacerbated by the lack of clear roles and responsibilities as multiple agencies are often involved in the uncoordinated protection of wetlands leading to poor governance ([WWT Consulting, 2018](#)). This is a challenge experienced in Zimbabwe, whilst one might argue that the multiplicity of government agencies could have many benefits, unfortunately these are not realized because of the lack of effective inter-agency collaboration. The main challenge that arises from the lack of unclear division of roles is that of accountability as it makes it difficult to hold government agencies accountable where there is unclear or overlapping roles ([Falayi, Gambiza, Schoon, 2021](#)). This unclear division of roles is a driver for collaboration as much as it is an obstacle to collaboration because it results in confusion between the government agencies. It was also argued, using Harare as a case study by [Mwonzora, 2021](#) that the

initiatives taken by councils towards effective wetland management have been hindered by the absence of clearly defined responsibilities for wetland conservation among the different government departments such as Department of Physical Planning and government agencies such as EMA. This clearly indicates the hindrance of efforts towards a collaborative approach.

Due to differing mandates, budgets allocations and capacities, different government institutions operate under different priorities and agendas. The divergent goals and missions across agencies create obstacles as each different entity prioritizes different aspect of an issue. It was noted for instance that the Environmental Management Agency (EMA), in wetland management is solely focused on the protection of the environment whereas councils are focused not only on the environment but also towards the improvement of people's livelihoods as well ([Marambanyika and Beckedahl, 2017](#)). It has been argued that the decisions with regard to land usage are mostly influenced by economic factors thus making an integrated approach with environmental considerations necessary ([Mitchell and Buton, 2004](#)), this has however not been the case in Zimbabwe as urban councils have a tendency to prioritize huge projects at the expense of the environment with the most prominent example being the construction of the Long Chen Plaza on a wetland in Harare despite the advice of EMA. The fact that the agency failed to stop the construction despite having the authority to, is also an issue of concern and has been linked to corruption that has been reported as rampant in some government institutions.

In sync with the above points, the differing priorities are further exacerbated by the non-alignment of the laws. [Beukens, R., \(2013\)](#) stated that implementation of plans may require collaboration with external organizations that possess legal authority, but partners may not always have the necessary resources or motivation to fulfil their roles effectively. This challenge was noted in the [Auditor General report](#) of 2021 where it states that Environmental Management Agency (EMA) lacks the mandate to dismantle structures illegally erected on wetlands, as per the Environmental Management Act whilst the authority to demolish such structures is vested in local authorities through the Town Planning Act [Chapter 29:12]. This legislative framework often creates coordination and collaboration challenges with local authorities, who may be hesitant to enforce demolitions on wetlands, frequently without citing clear and substantive reasons.

It is noted that Southern Africa's laws and policies have largely failed to deliver environmental governance justice but another issue that is not largely talked about enough is the commitment to follow the law ([Falayi, Gambiza, and Schoon, 2021](#)). There is a noticeable

lack of dedication from local government authorities to uphold existing city regulations, including the City Master Plan and the Regional Town and Country Planning Act (Mwonzora, 2021). This raises questions about whether the issue lies in the ineffectiveness of our laws and policies or a lack of commitment by officials and agencies to enforcing them. A critic is being raised that having good policies and laws in place is insufficient, but also having the will to implement them. In the light of what is happening someone is bound to agree with this.

Developing and implementing Local Environmental Plans (LEAPs) as mandated by the Environmental Management Act is essential for safeguarding wetlands, and the failure of local authorities to prepare these plans is irresponsible. In 2018, an EMA audit report revealed that, of the evaluated 74 local authorities in 2018, 36 had developed Local Environmental Action Plans (LEAPs) however, only 11 of these authorities had actually implemented their plans but EMA had not implemented any measures to guarantee compliance. The complacency towards their own roles makes it difficult to collaborate with others as they are already failing to uphold their duties. The audit report goes further to explore the inactiveness of the National Environmental Council which has resulted in their failure to convene at least four times annually resulting in unfulfilled duties to foster collaboration among government departments, local authorities, private entities, NGOs and other organizations involved in environmental conservation. In addition, the National Environmental Council is mandated to providing recommendations to relevant stakeholders and authorities to harmonize environmental related functions, which it has not fulfilled.

Another hindrance towards inter-agency collaboration is limited resources especially funding (Falayi, Gambiza, Schoon, 2021). The lack of financial resources is without doubt, one of the largest barriers which affects the everyday planning and implementation but also the moral of the government officers which results in the exodus to private sectors, NGOs and even diaspora. In addition, financial restrictions have led to demotivated employees who are lacking in basic resources (Plan Afric, 2000). Even if land use plans for wetlands are made, with lack of financial resources to implement them, it becomes a sheer waste of time thus adding on to the disinterest in inter-agency collaboration by the government agencies. Effective collaboration among agencies requires officers to go above and beyond their duties. This cannot happen if there are demotivated. Insufficient funding has exacerbated factors like lack of commitment to environmental laws, with corruption in some institutions further hindering collaboration.

Political interference and corruption have been a re-occurring theme in most articles (Kudumba, (2022), Mwonzora, (2021); Gweshe, (2022) pointing it out as one of the main reasons for the continued degradation of wetlands in urban areas. Political leaders have pushed for the populist policies that permit illegal exploitation of wetlands in efforts to acquire votes (Kudumba, 2022). The fraudulent issuance of land development and EIA certificates has been noted as precursors for wetlands degradation (Gweshe, 2022). In the case of Harare council, land barons have been reported to have acquired land through leveraging of political connections (Kudumba, 2022). There have been instances where the government agencies have been afraid to confront these powerful individuals (Gweshe, 2022). Political meddling and corruption have corroded the main requirements for coordinated collaboration to occur which are trust and transparency among the government agencies and departments. Collaboration should be a transparent process that provide reassurance that all actions are accountable, leaving no room for hidden agendas or unchecked decisions (CEQ, 2007) as government agencies often shy away from collaborative efforts due concerns over long term viability. Thus, fostering trust through transparent and open communication can help establish a strong foundation for coordinated collaboration (Doherty, 2015).

## **2.4 OPPORTUNITIES IN COLLABORATION**

Multiple scholars have highlighted on how collaboration enables resources sharing and operational efficiency (Tait and Brunson (2021), Callens and Verhoest, (2022), Doherty, (2015). The importance of pooling financial resources and leveraging diverse skill sets that the different agencies bring to the table has been emphasized (Tait and Brunson 2021). This enables the agencies to extend the scale and reach for their impacts through addressing of various cross cutting issues. Inter-agency collaboration also increases operational efficiency through the prevention of similar operations from occurring in parallel by the government agencies thus addressing the complications of fragmentation and overlapping of responsibilities.

Callens and Verhoest, 2022 highlighted how the convergence of multiple experiences and perspective of the different agencies in inter-agency collaboration can foster creative ideas and innovations through bringing together individuals with varied background creating more opportunities to foster creative ideas challenging the pre-existing beliefs of what is perceived as impossible or difficult. This is supported by Tait and Bunson (2021) whose findings pointed out that participants from diverse perspectives in cooperative management can bring about a huge opportunity in collaboration.

According to Tait and Bunson 2021, the overall collaborative efforts facilitate and maintain opportunities. Facilitation of opportunities involves the sharing of resources, expertise as well as learning from each other's perspectives and skills (government departments). Maintenance of opportunities focuses on meeting goals and opportunities, fostering open communication and trust ensuring sustainability and finding common ground reducing conflicts leading to a more unified approach by the government institutions towards land use planning for wetland conservation.

## CHAPTER 3

### METHODOLOGY

#### 3.1 DESCRIPTION OF STUDY AREA

##### 3.1.1 LOCATION

The study was conducted in Bindura (17°18'S, 31°20'E, altitude of 1100 m), located in the north-eastern part of Zimbabwe, approximately 89 kilometres from Harare, the capital city. As the administrative centre of Bindura District, it is the provincial capital of Mashonaland Central Province, boasting a population of over 44,000. Bindura is home to most provincial offices for the government departments and agencies that deal with natural resources management such EMA and Forest Commission.

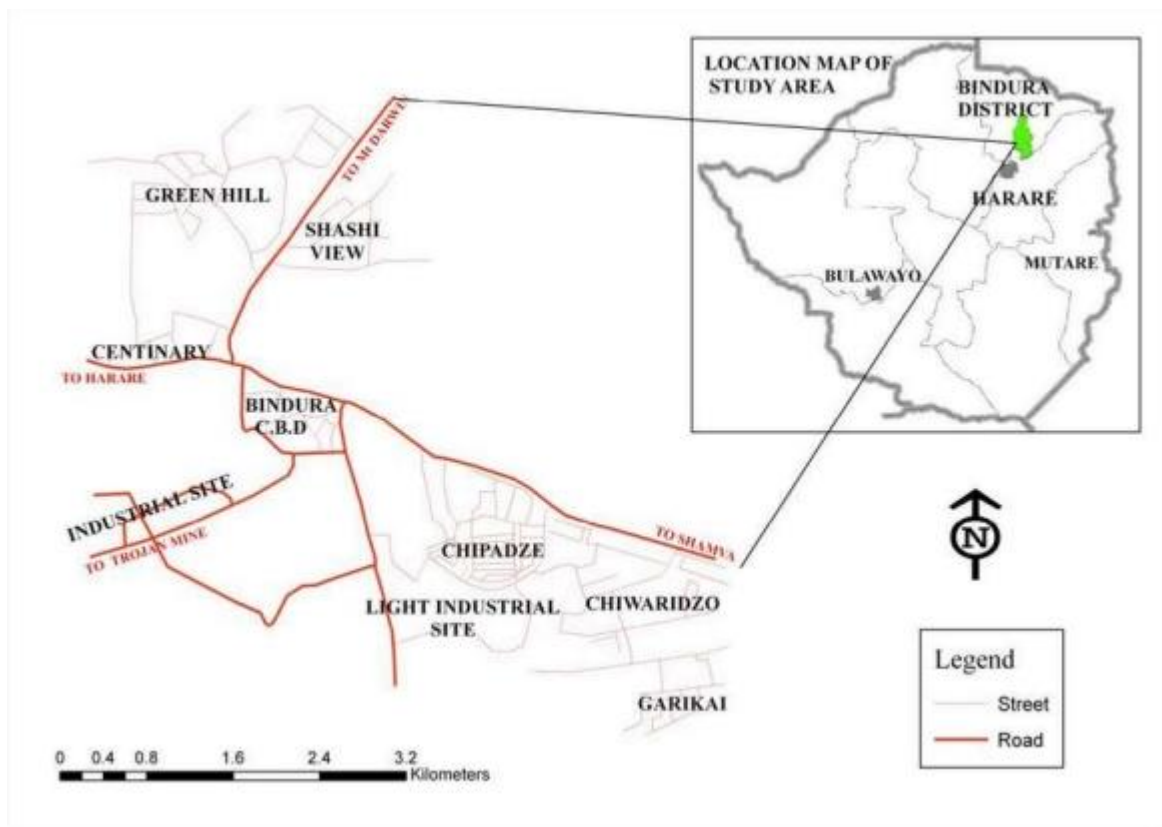


Figure 3.1 study area map of Bindura Urban, Zimbabwe: Scientific Figure on ResearchGate. Available from: [https://www.researchgate.net/figure/Study-area-map-of-Bindura-Urban-Zimbabwe-Source-own-elaboration\\_fig1\\_328165935](https://www.researchgate.net/figure/Study-area-map-of-Bindura-Urban-Zimbabwe-Source-own-elaboration_fig1_328165935).

### **3.1.2 CLIMATE AND NATURAL REGION**

Bindura is situated in Natural Regions II b. The region normally experiences an average rainfall of 750-1000 mm per season, with a temperature range of 15-30°C. Although the climate has been unpredictable over the years due to the effects of climate change and variability.

### **3.1.3 SOIL**

Bindura is characterized by fertile Black and Red soils, making it suitable for both extensive and intensive agriculture. Other soil types include sandy loams, clay loams, and heavy clays classified as fersiallitic soils, sillicic and vertisols according to the Zimbabwe soil classification system. These soils are correlated with luvisols, lixisols and vertisols according to the World Reference Base (WRB) soil groups. These support the cultivation of crops such as maize, tobacco, soya beans, and groundnuts.

### **3.1.4 VEGETATION**

The common vegetation physiognomic type is Tree Bush Savanna (TBS) on heavy soils, *Brachystegia Spiciformis* (Msasa) is the dominant species along with *Brachystegia Boehmii* (Mfuti), *Bauhinia Macrantha* (Mpondo) and *Afrormosia Angolensis* (Rwanga). On granitic soils, *Brachystegia Boehmii* on lower ground and wetlands in Tree savanna (TS) and Grassland Savanna (GS) becomes dominant followed by *Julbernardia Globiflora* (Mnondo).

### **3.1.5 ECONOMIC ACTIVITIES**

Residents of Bindura urban are involved in various activities, encompassing both agricultural and non -agricultural pursuits such as market gardening, crop production, poultry farming and mining.

### **3.1.6 ENVIRONMENTAL CONSERVATION**

Bindura faces significant environmental challenges, including illegal mining activities, pit sand and river sand extraction, deforestation, veld fires during the fire season (31 July to 31 October which is ordinarily the dry season). Government departments such as EMA employ strategies such as awareness campaigns through commemoration of environmental days and enforcement of the Environmental Management Act to combat issues of environmental concern.

## **3.2 DATA COLLECTION**

### **3.2.1 SAMPLING AND SELECTION OF RESPONDENTS**

Purposive sampling to select respondents that provided the required information was used. The target population were the government officers involved in land use planning for wetlands in order to gather their perception on the collaboration, challenges and opportunities in land use planning for wetlands. Ten government departments/ agencies were selected with varying levels of involvement in land use planning for wetlands. These included Environmental Management Agency (EMA), Bindura Municipality, Department of Physical Planning, Ministry of Mines and Mining Development, Land Management and Administration Department under the Ministry of Lands, Agriculture, Fisheries, Water and Rural Resettlement, Department of Agricultural, Technical and Extension Services (AGRITEX), Zimbabwe National Water Authority (ZINWA), Forest Commission, Upper Ruya Sub- catchment council and Middle Mazowe Sub- catchment council offices in Bindura Urban.

### **3.2.2 USE OF QUESTIONNAIRES**

Structured in-depth questionnaires were employed to collect data from these government departments and agencies. This method was chosen because of its ability to provide structured and standardized responses that simplify the analysis process. Furthermore, questionnaires offer clear response options and scales, making quantification and measurement easier thus enabling the calculation of descriptive statistics to draw meaningful conclusions from the findings. The questionnaire comprised of three sections: the demographics section, collaboration section aimed at assessing the level of collaboration between the departments /agencies and the challenges section to determine the challenges and opportunities encountered. Some of the questions allowed the respondent to give more than one response which allowed the respondent to give all possible responses to the issue in question. Out of the twenty questionnaires distributed, the researcher successfully obtained responses from fifteen officers with varying levels of involvement to the topic in question.

### **3.3 DATA PROCESSING, ANALYSIS AND PRESENTATION**

#### **3.2.1 DATA PRESENTATION**

A data code sheet was designed to uniformly code the data for entry purposes.

#### **3.3.2 DATA ANALYSIS**

The data was then entered and analysed using SPSS and MS Excel. The analysed data was presented in form of tables and narrative description. This allowed for ease of interpretation of findings.

### **3.4 VALIDITY AND RELIABILITY OF DATA**

To strengthen the validity of the methodology and reliability of the data collected, the following processes were carried out.

#### **3.4.1 PILOT TESTING**

The questionnaires were pre-tested before the official data collection. Pilot questionnaires were administered to a sample of the targeted respondents. The sample respondents were chosen based on their administrative roles and familiarity with the research problem and subject under study. All errors and the ambiguous questions were addressed by restructuring them based on the feedback from the sample respondents. The collected data was also tested to see if analysis was possible in MS Excel and SPSS.

#### **3.4.2 USE OF TICK BOXES**

The questionnaires were made to consist of only ten essential questions based on the research objectives and questions. These questions were mostly close ended questions with tick boxes responses to increase the respondent's willingness to respond to them. This also made the data collection time efficient ensuring a substantial amount of data to be collected within a reasonable timeframe to allow for timely analysis and interpretation of the results.

#### **3.4.3. EXPLAINED THE RESEARCH STUDY TO THE RESPONDENTS**

The study was explained to the respondents giving the objectives of the study, elaborating the nature of questions and providing assurance of confidentiality of the information provided.

#### **3.4.4 USE INDIRECT QUESTIONING**

This method allowed respondents to be more honest without suspicion and feeling a strong need to conform to societal norms.

#### **3.4.5 PERIOD FOR ADMINISTERING OF QUESTIONNAIRES**

A suitable time (start of the workday) and date (weekdays) was selected to allow for the government officers the opportunity to participate in a conducive mood.

#### **3.4.6 REGULAR FOLLOW UPS**

Regular follow ups with the government agencies on the status of the questionnaire completion were made to remind the respondents as to ensure completion of the task.

## CHAPTER 4

### RESULTS

#### 4.1 INTRODUCTION

The findings of the study are presented in section 4.2 to 4.11.

#### 4.2 RESPONDENTS DEMOGRAPHICS

##### 4.2.1 GENDER DISTRIBUTION

Table 4.1 shows the percentage of male and female respondents

| Gender | Number officers | Percentage |
|--------|-----------------|------------|
| Male   | 10              | 67         |
| Female | 5               | 33         |

The majority of the respondents were male, occupying a percentage of 67 and female accounting for a percentage of 33. This indicates a gender imbalance in the agencies responsible for land use planning and wetland conservation.

##### 4.2.2 AGE DISTRIBUTION

Table 4.2 shows the percentage age groups of the respondents

| Age ranges | Number of officers | Percentage |
|------------|--------------------|------------|
| 20-30      | 4                  | 27         |
| 31-40      | 5                  | 33         |
| 41-50      | 2                  | 13         |
| 51-60      | 4                  | 27         |

The respondent's age groups varied with the majority falling within 31-40 which consisted of 33%, followed by 20-30 and 51-60 which tied at 27% and the least being 41-50 which was 13% of the population. These findings suggest that younger and middle-aged officers are the majority in LUP for wetlands.

#### **4.2.3 YEARS OF EXPERIENCE**

Table 4.3 shows the number of officers and years of experience

| <b>Experience in years</b> | <b>Number of officers</b> | <b>Percentage</b> |
|----------------------------|---------------------------|-------------------|
| 0-5                        | 5                         | 33                |
| 6-10                       | 5                         | 33                |
| 11-15                      | 3                         | 20                |
| 16-20                      | 2                         | 13                |

The majority had had a work experience of 0-5 and 6-10 which both consisted of 33% of the respondents followed by 11-15 which was 20% and the least being those with an experience of 16-20 years which made up 13%. The data indicates a balanced mix of early-career and mid-career professionals, with fewer senior officers involved.

### **4.3 LEVEL OF INVOLVEMENT IN LAND USE PLANNING FOR WETLAND**

Table 4.4 shows the level of involvement in land use planning for wetland

| <b>Level of involvement</b> | <b>Number officers</b> | <b>Percentage</b> |
|-----------------------------|------------------------|-------------------|
| Directly involved           | 10                     | 67                |
| Indirectly involved         | 5                      | 33                |

Sixty-seven percent of the officer respondents were directly involved in LUP whilst the remainder was not. This demonstrates that most of the officers are actively engaged in the planning process thus adding weight to their perspectives on collaboration among government agencies.

## 4.4 ROLES AND RESPONSIBILITIES

Table 4.5 shows the roles and responsibilities of the respondents

| Theme                         | Number of officers | Percentage |
|-------------------------------|--------------------|------------|
| Permitting                    | 8                  | 53         |
| Compliance monitoring and EIA | 10                 | 67         |
| Data collection and Research  | 3                  | 20         |
| Policy development            | 3                  | 20         |
| Public engagement             | 7                  | 47         |
| Other                         | 1                  | 7          |

The government officer respondents had varying levels of involvement, from planning, permitting, compliance monitoring and EIA, data collection and research, policy development to community engagement and education. The roles were not mutually exclusive as more often than not, the officers had more than one duty in LUP and could be involved in some or all the stated varying duties in LUP. The majority of the respondents participate in compliance monitoring and EIA. These consisted of 63%, followed by permitting which consisted of 53%. Twenty percent of the respondents also engage in data collection and research as well as educate the public in regards to LUP and wetland conservation. The remainder 7% percent were involved in other than the stated above duties in LUP.

## 4.5 LEVEL OF COLLABORATION AMONG GOVERNMENT INSTITUTIONS IN LUP FOR WETLANDS

Table 4.6: Perceptions of officers on collaboration levels between government departments and agencies

| Rank        | Number of officers | Percentage |
|-------------|--------------------|------------|
| 1-very low  | -                  | -          |
| 2-Low       | -                  | -          |
| 3-moderate  | 8                  | 53         |
| 4-high      | 6                  | 40         |
| 5-very high | 1                  | 7          |

The respondents perceived the level of collaboration among agencies to be at least moderate as 53% perceived it to be moderate, 40% high and 7 % rated it to be very high. The absence of low and very low ratings indicates a general perception that some level of collaboration exists among the government departments/agencies in wetlands conservation and planning.

## 4.6 FREQUENCY OF INTERACTION

The frequency of interaction varied, with 40% of the respondents indicating occasional interactions, 33% claiming frequent interactions and 20% stating always. Only 7% reported rarely interacting with other agencies/departments.

Table 4.7: Frequency of interaction among departments /agencies

| Rank               | Number of officers | Percentage |
|--------------------|--------------------|------------|
| Rarely             | 1                  | 7          |
| Occasionally       | 6                  | 40         |
| Frequently         | 5                  | 33         |
| Always             | 3                  | 20         |
| <b>Grand Total</b> | 15                 | 100        |

## 4.7 INTENSITY OF INTERACTION

Table 4.8: The intensity of interaction among government departments/agencies

| Level of interaction | Frequency | Percentage |
|----------------------|-----------|------------|
| Cooperation          | 6         | 40         |
| Coordination         | 1         | 7          |
| Collaboration        | 8         | 53         |

The intensity of inter-agency interaction was analysed using three levels: cooperation, coordination and collaboration as defined by [Chesney, Callens, and Verhoest, 2022](#). The findings revealed that 53% of respondents identified the interaction level as "collaboration," meaning a close and intensive relationship with shared risks, resources, and goals. Forty percent perceived their interaction level as "cooperation," defined by an exchange of information and expertise, typically occurring only when necessary and 7% viewed the interaction level as "coordination," where goals and activities are aligned but integration remains limited.

## 4.8 CHALLENGES IN COLLABORATION

The majority deemed political intervention and limited resources as the most significant barriers reflecting systematic issues that need urgent attention. The researcher did an impact rating based on the respondents' chosen challenges average ranking as shown in **Table 4.9** with political intervention having the most impact thus indicating it should be prioritised in strategy in planning followed by limited resources, insufficient communication and lastly conflicting priorities.

Table 4.9 shows challenges in collaboration among government departments /agencies

| Challenges                 | Frequency | Percentage |
|----------------------------|-----------|------------|
| Conflicting priorities     | 4         | 27         |
| Insufficient communication | 4         | 27         |
| Political intervention     | 8         | 53         |
| Limited resources          | 8         | 53         |

Table 4.10 shows the challenges and their average ranking score and priority ranking

| Challenge                  | Average ranking | Priority Ranking |
|----------------------------|-----------------|------------------|
| Conflicting priorities     | 3.00            | 4 <sup>th</sup>  |
| Insufficient communication | 1.75            | 3 <sup>rd</sup>  |
| Political intervention     | 1.13            | 1 <sup>st</sup>  |
| Limited resources          | 1.50            | 2 <sup>nd</sup>  |

## 4.9 COLLABORATION EFFORTS AMONG THE GOVERNMENT INSTITUTIONS

Table 4.11 shows the respondents perception on the adequacy of collaboration efforts among the government institutions.

| Collaboration efforts | Number officers | Percentage |
|-----------------------|-----------------|------------|
| Inadequate            | 10              | 67         |
| Adequate              | 5               | 33         |

Sixty-seven percent perceived the collaboration efforts among the government department /agencies to be inadequate whilst 33% disagreed with this notion.

## 4.10 OPPORTUNITIES FOR ENHANCING COLLABORATION

The top opportunities identified for improving collaboration included the Development of common guidelines and frameworks with (87%), Regular inter-agency meetings (60%), Collaborative research and data collection (53%), Community engagement (47%), Shared funding initiatives (33%) and Inter-agency task forces (33%).

Table 4.12: Critical opportunities for enhancing collaboration efforts among the government agencies /departments in land use planning to protect wetlands.

| Critical opportunities                         | Number of officers | Percentage |
|------------------------------------------------|--------------------|------------|
| Shared Funding                                 | 5                  | 33         |
| Establishment of inter-agency task force       | 5                  | 33         |
| Development of common guidelines and framework | 13                 | 87         |
| Regular inter-agency meetings                  | 9                  | 60         |
| Collaborative research and data collection     | 8                  | 53         |
| Community engagement                           | 7                  | 47         |

#### 4.11 STRATEGIES FOR ENHANCING COLLABORATION

Table 4.13 shows the officer perception on critical strategies to enhancing collaboration efforts among the government agencies /departments in land use planning to protect wetlands.

| Critical strategies                                      | Frequency | Percentage |
|----------------------------------------------------------|-----------|------------|
| Regular inter-agency meetings and communication channels | 14        | 93         |
| Joint project and initiatives                            | 13        | 87         |
| Development of a unified communication strategy          | 10        | 67         |
| Shared funding mechanisms                                | 13        | 87         |
| Establishment of clear roles and responsibilities        | 12        | 80         |
| Development of common guidelines and framework           | 11        | 73         |

Ninety-three percent of the respondents stated regular inter-agency meetings and communication channels as a critical strategy followed by 87 % who chose joint projects initiatives and shared mechanisms, 80% on establishment of clear roles and responsibilities, 73 % on development of common guidelines and framework and development of a unified communication strategy having the least frequency of 67%. The researcher further calculated the critical strategy average rankings by the respondents as shown on the table below

Table 4.14 Critical strategies and their average ranking score

| Critical strategies                                      | Average ranking |
|----------------------------------------------------------|-----------------|
| Regular inter-agency meetings and communication channels | 1.07            |
| Joint project and initiatives                            | 1.08            |
| Development of a unified communication strategy          | 1.40            |
| Shared funding mechanisms                                | 1.15            |
| Establishment of clear roles and responsibilities        | 0.75            |
| Development of common guidelines and framework           | 1.09            |

Basing on the average ranking scores of the respondents' selected critical strategies, the researcher prioritized the strategies accordingly. The Priority ranking based on averaged were as follows with **4.11.1** having the most priority and **4.11.6**, the least.

- 4.11.1** Establishment of clear roles and responsibilities as the top strategy
- 4.11.2** Regular inter-agency meetings and communication channels
- 4.11.3** Joint project and initiatives
- 4.11.4** Development of common guidelines and framework
- 4.11.5** Shared funding mechanisms
- 4.11.6** Development of a unified communication strategy had the least preference

The priority ranking suggests that establishing clear roles and responsibilities is the most prioritised strategy, followed by regular meeting, joint projects and common guidelines.

## **CHAPTER 5**

### **DISCUSSION**

#### **5.1 INTRODUCTION**

The success of natural resources management and environmental protection in a community depends on participation efforts of various stakeholders involved in the planning and implementation of developing programmes in the areas. There is need for a shared vision in executing work by government institutions in the same area through collaborative efforts that enable putting of resources, experiences and other factors together to achieve common goals. This chapter discusses the findings in direct relation to the research aim which is to explore the level of collaboration and coordination between the government agencies in land use planning for wetlands and also identify challenges and opportunities for improvement.

#### **5.2 LEVELS OF COLLABORATION**

The findings show the collaboration level in land use planning and wetland management in Bindura, to not only be moderate but inconsistent suggesting that the efforts in collaboration are episodic and event driven as the majority of the respondents (73%) fall within the categories of occasional and frequent interactions thus indicating a lack of systematic or institutionalized collaboration efforts. Not all collaboration efforts are equal. At the bottom is coordination, at middle is coordination and the top is full-fledged collaboration. Cooperation is when there is an exchange of information and expertise, typically occurring only, when necessary, coordination being when goals and activities are aligned and collaboration is when there is a close and intensive relationship with shared risks, resources, and goals ([Chesney, Callens, and Verhoest, 2022](#)). The intensity of collaboration is split between basic cooperation and full collaboration. This lack of coordination indicates a missing middle ground where goals and activities are strategically aligned which is crucial for long term success. The episodic nature of interactions likely stems from this lack of alignment leading to reactive rather than proactive approach to collaboration. Despite these setbacks, the presence of some degree of collaboration with fickle interaction and intensity indicates a willingness by the government agencies and departments in wetlands conservation and land use planning to collaborate. However, efforts are often hindered by constraints.

### 5.3 CHALLENGES

The findings suggest that one of the main constraints or barriers of collaboration and teaming up of government institutions in wetland planning and development is political interference. This aligns with literature such as [Kudumba, \(2022\)](#), [Mwonzora, \(2021\)](#); [Gweshe, \(2022\)](#), which underscores how political dynamics can disrupt the effectiveness of conservation initiatives by government agencies and departments. Limited resources were also identified as a major constraint. Inadequate financial and human resources hamper collaborative projects, restricting the ability of government institutions to engage in proactive planning and communications as well as limiting their ability to handle existing constraints. ([Falayi M, Gambiza J, Schoon M, 2021](#) and [Planc Africa 2000](#)). The findings indicates that insufficient communication and conflicting priorities are notable constraints but secondary challenges, exacerbating the major containers such as political interference and limited resources. These secondary challenges reflect on operational inefficiencies.

### 5.4 OPPORTUNITIES

Despite the constraints, the study reveals the significant opportunities for enhancing collaboration in land use planning and wetlands protection. The opportunities identified for improving collaboration include the development of common guidelines and frameworks which was viewed as an opportunity by 87% of the respondents, which could facilitate a unified approach to wetland conservation. Additionally, regular inter-agency meetings supported by 60% of the participants can foster stronger relationships and communication among agencies as well as provide a platform for discussing issues concerning wetland conservation. Collaborative research and data collection which was favoured by 53% can lead to better management and understanding of wetland ecosystems thus promoting effective land use planning for wetlands. Furthermore, community engagement, highlighted by 47%, emphasises the importance of involving local communities in conservation efforts, as stakeholders are more likely to support initiatives that reflect their needs and concerns. The least endorsed opportunities by the respondents were shared funding which can alleviate resources constraints and establishing task forces which can provide undivided attention on specific conservation challenges, fostering a more coordinated response to pressing issues. These opportunities indicate a potential for more effective inter-agency collaboration in wetland conservation through land use planning. The identified opportunities are in line with

the existing literature (Tait and Brunson (2021), Callens and Verhoest, (2022), Doherty, (2015).

## **5.5 CONCLUSION**

Current collaboration efforts are insufficient resulting in mediocre collaboration which is constrained by limitations in resources, political interference, insufficient communication and conflicting priorities. However, despite this, numerous opportunities to enhance the collaboration efforts amongst government institutions for wetlands conservation through land use planning exist but to make sure that these opportunities are come to fruition, there should be more emphasis on critical strategies that integrate the social, economic and environmental aspect of wetland resources planning and management by environmental government institutions.

## **CHAPTER 6**

### **CONCLUSION AND RECOMMENDATIONS**

#### **6.1 CONCLUSION**

The finding of this study illustrates a moderate yet inconsistent level of collaboration among government institutions involved in land use planning and wetland management in Bindura. While there is a willingness to engage in collaborative efforts, the episodic nature of interactions highlights a critical gap in coordination. Key challenges such as political interference and limited resources, hinder the effectiveness of these initiatives, creating barriers that prevent meaningful progress. Despite these constraints, the research identifies substantial opportunities for enhancing collaboration such as development of common guidelines and frameworks as aforementioned before are all viable chances to foster a more unified approach to wetland conservation through land use planning thus establishing a more effective and proactive framework for land use planning with the consideration of wetland ecosystems.

In conclusion, while the current level of collaboration presents room for improvement, it is imperative that appropriate strategies are implemented to transform these opportunities into actionable outcomes, intimately leading to a more effective wetland conservation and management through land use planning.

#### **6.2 RECOMMENDATIONS**

This study proposed the following recommendations to ensure the existing opportunities are met.

##### **6.2.1 DEVELOPMENT OF COMMON GUIDELINES AND FRAMEWORK**

A standardized guideline should be created to harmonize policies across departments. This promotes a unified approach among government departments and agencies, creating a single voice regarding wetland management and planning, thus reducing confusion among government institutions as they establish clear, defined roles and responsibilities. These guidelines should be based on best practises and adapted to local context, ensuring that they are practical and actionable.

### **6.2.2 CAPACITY BUILDING**

Addressing the issue of limited resources is vital for effective collaboration. Government departments should prioritise resource allocation for wetlands initiatives. This includes not only financial resources but capacity building programmes that equip staff with the necessary skills and knowledge for effective collaboration. Training sessions and workshops can enhance understanding of collaborative practises and improve overall effectiveness of collaboration efforts towards land use planning for wetlands.

### **6.2.3 ENHANCING COMMUNICATION STRATEGIES**

Regular inter-agency meetings should be institutionalised to provide a platform for sharing information, discussing challenges and collectively developing solutions. Additionally leveraging technology can enhance real-time communication and information sharing.

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## APPENDICES

### 8.1 APPENDIX 1: QUESTIONNAIRE

#### **BINDURA UNIVERSITY OF SCIENCE EDUCATION DEPARTMENT OF NATURAL RESOURCES MANAGEMENT**



Dear participant, thank you for taking the time in this important research study focused on the collaboration among government agencies involved in land use planning and wetland conservation. Your insights will be invaluable in understanding the current landscape of inter-agency collaboration and identifying areas for improvement.

**NB.** The information provided will be treated with confidentiality and is for research purpose only.

Tick where check boxes ✓ are provided and write where writing spaces \_\_\_\_ are provided

## Section A: Demographics

### 1. Department/Agency

☐EMA

☐Bindura Municipality

☐ZINWA

☐AGRITEX

☐Department of Physical Planning

Other: \_\_\_\_\_

### Title /Position

\_\_\_\_\_

### Years of Experience on the Job

\_\_\_\_\_

### Roles and Responsibilities:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Sex: F ☐ M ☐

### •Age Estimate:

Under 20 ☐ 20-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ Over 60 ☐

1. Would you say that you are directly involved in land use planning processes for wetlands? Yes ☐ No ☐

**2. In what capacity are you involved in land use planning concerning wetlands?**

☐ Permitting

☐ Compliance monitoring and EIA assessments

☐ Data collection and research

☐ Policy development

☐ Public engagement and education

Other \_\_\_\_\_

**Section B: Collaboration**

**3. On a scale of 1-5, how would you rate the current level of collaboration between your agency/department and others in protecting wetlands via land use planning?**

☐ 1 - Very Low

☐ 2 - Low

☐ 3 - Moderate

☐ 4 - High

☐ 5 - Very High

**4. How frequently does your agency interact with other agencies/departments regarding wetland planning through land use planning?**

- ☐ Never
- ☐ Rarely
- ☐ Occasionally
- ☐ Frequently
- ☐ Always

**5. Which of these would you use to describe your relationship with other agencies/departments in regard to planning for wetlands?**

- ☐ There is an exchange of information and expertise by government departments/agencies only when necessary.
- ☐ There are processes by which actors align their goals and activities.
- ☐ There is a close and intensive interaction between the government departments/ agencies, with shared risks, resources, capabilities, and responsibilities, achieving common goals and outcomes together.

**Section C: Challenges**

**6. What are the main challenges your agency/department faces in collaboration with other agencies/departments towards land use planning to protect wetlands? (Select 3)**

- ☐ Conflicting priorities
- ☐ Insufficient communication
- ☐ Political intervention
- ☐ Limited resources
- ☐ Other (please specify): \_\_\_\_\_

**7. Can you rate the chosen challenges on a scale of 1-5?**

*(Rate each challenge from 1 = Very Low Impact to 5 = Very High Impact)*

- Conflicting priorities: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
- Insufficient communication: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
- Political intervention: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
- Limited resources: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

**Section D: Opportunities and Recommendations**

**8. In your opinion, is enough being done in terms of collaboration efforts among the government departments/ agencies? Yes ☐ No ☐**

**9. What are the most critical opportunities for enhancing collaboration among government agencies/departments in land use planning to protect wetlands? (select up to 3)**

- ☐ Shared funding initiatives for wetland conservation
- ☐ Establishment of inter-agency task forces
- ☐ Development of common guidelines and framework
- ☐ Regular inter-agency meeting and communication channels
- ☐ Collaborative research and data collection
- ☐ Community engagement and public awareness
- ☐ Other \_\_\_\_\_

**10. Based on your experience, what strategies would you recommend to enhance collaboration among the government agencies in land use planning and wetland conservation?** *(Please select all that apply and rank the strategies from 1-5, with 5 being the most preferred)*

☐ Regular inter-agency meetings and communication channels: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

☐ Joint project and initiatives: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

☐ Development of a unified communication strategy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

☐ Shared funding mechanisms for wetland projects: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

☐ Establishment of clear roles and responsibilities: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

☐ Development of common guidelines and framework: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

☐ Other \_\_\_\_\_ : 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Thank you for your participation! Your insights are valuable for understanding and improving land use planning and wetland protection efforts.

## 8.2 APPENDIX 2: UNIVERSITY LETTER: REQUEST FOR ASSISTANCE

### DEPARTMENT OF ENVIRONMENTAL SCIENCE



**Bag 1020**      **BINDURA, Zimbabwe**  
Tel: 263 - 71 – 6505  
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Email: tnyamugure@buse.ac.zw

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### BINDURA UNIVERSITY OF SCIENCE EDUCATION

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10 February 2025

To whom it may concern

Dear Sir/Madam

This letter is a request for you to assist **Tadiwanashe Ernest Karindakanga** (ID 05-157859-S61), a student Bachelor's Degree student at Bindura University of Science Education, in collecting data for his research project titled "*The Efficacy of Collaboration among Government Institutions in Land Use Planning for Wetland Conservation in Bindura, Mashonaland Central Province, Zimbabwe*". The above is a student in our faculty.

Thank you for your assistance.

Yours faithfully

**Mr T. Nyamugure**      (Chairman- Environmental Science)

