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Assessing Climate Change Impacts on the Safety and Wellbeing of Children in Ward 16, Mupoperi Makoni District Zimbabwe

By

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APPROVAL FORM

The undersigned hereby confirm that they have thoroughly reviewed this dissertation and approve its submission for evaluation. They further attest that the study meets the established departmental standards and complies with all academic requirements under the approved research title **"ASSESSING CLIMATE CHANGE IMPACTS ON THE SAFETY AND WELLBEING OF CHILDREN WARD 16 MUPOPERI MAKONI DISTRICT"** Submitted by **TARIRO GRACE GWANZURA** in partial fulfilment of Bachelor of Science Honours Degree in Development Studies.

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DECLARATION

I, **Tariro Grace Gwanzura (B212211B**) affirm that this is the product of my creation.

DEDICATION

I wholeheartedly dedicate this piece of work to my beloved parents Mr.P and Mrs.O Gwanzura and to my siblings Marlen.M. Gwanzura and Hamish.T.Gwanzura whose unwavering support and guidance have been the foundation of my journey. I also dedicated this study to the children of Mupoperi ward 16 whose courage in the face of climate adversity inspires hope for sustainable and equitable future. May their voices catalyse transformative action I would not have done it without them for that I am forever grateful.

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ABSTRACT

Climate change presents a profound and escalating threat to vulnerable populations particularly children whose physical, emotional and educational wellbeing is directly influenced by environmental instability. This research provides a critical analysis of how climate change affects the safety and overall wellbeing of children in ward 16,Mupoperi Makoni District Zimbabwe a rural area which is marked by subsistence farming and limited access to basic services. This study employs a mixed-methods design, integrating quantitative surveys with focus group discussions and key informant interviews to examine the effects of climate variability particularly irregular rainfall patterns and extended droughts on children's vulnerability to food shortages, health complications, educational disruptions and emotional distress. Findings indicate that children in ward 16 are increasingly socioeconomically vulnerable with many families not able to meet their basic demands due reduced agricultural productivity. Girls are heavily burdened as gender roles often compel them to miss school in order give hand with household chores such as water collection during dry seasons. Health professionals and educators confirmed rising incidences of malnutrition ,waterborne diseases and emotional distress among children .While community based interventions such as school feeding schemes and borehole projects have helped cushion some of the adverse effects ,these efforts remain fragmented and unevenly distributed.Childrens voices though central to their own resilience are often excluded from planning and policy processes. Drawing on the Social Vulnerability Theory and the Sustainable Livelihoods framework the study argues for a more integrated, child centered climate adaptation model. Key recommendations include the expansion of climate resilient infrastructure, mainstreaming of Psychological support in local services and active inclusion of children in community resilience planning .Ultimately the study underscores the urgent need for localized, participatory and equitable responses that safeguard the rights and wellbeing of children amidst escalating climate challenges in rural Zimbabwe.

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ACRONYMS AND ABBREVIATIONS

AMREF	African Medical and Research Foundation
DAPP	Development Aid from People to People
FDG	Focus Group Discussion
GBV	Gender Based Violence
IPCC	Intergovernmental Panel on Climate Change
ISC	Institute for Sustainable Communities
KII	Key Informant Interviews
LMICs	Low and Middle Income countries
MoHCC	Ministry of Health and Child Care
NASA	National Aeronautics and Space Administration
NCCRS	National Climate Change Response Strategy
NGO	Non-Governmental Organization
SDG	School Development Committee
SLF	Sustainable Livelihoods Framework
SPSS	Statistical Package for the Social Sciences
UN	United Nations
UNCR	United Nations Conventions on the Rights of the Child
UNICEF	United Nations Children's Fund
WHO	World Health Organization
ZimVac	Zimbabwe Vulnerability Assessment Committee
Zimstats	Zimbabwe National Statistics Agency

CHAPTER 1

1.1INTRODUCTION

Children as one of the most at risk groups face heightened challenges from climate change due to their increased sensitivity to environmental disruptions .This study seeks to investigate how climate related shifts affect the safety and overall wellbeing of children in Ward 16, Mupoperi. This chapter presents an overview of the study's background, outline the central problem under investigation and states the research objectives and guiding questions. Additionally it highlights the study's relevance, defines its scope and clarifies key terms used throughout the research.

1.2BACKGROUND OF THE STUDY

Climate change represents a critical and complex global issue of the 21st century carrying far reaching consequences for public health, ecological systems and socioeconomic resilience (IPCC,2022).Its ripple effects are particularly severe for vulnerable groups especially children whose developmental stages and physical sensitivity heighten their exposure to environmental hazards (UNICEF,2021).An estimated one billion children currently live in nations identified as being at extreme risk from climate related challenges including severe weather events ,water scarcity and food insecurity. These challenges directly threaten children's fundamental rights to protection, health and education as outlined in the United Nations Convention on the Rights of the Child (UNCRC, 2015).This situation underscores the urgent need for both scholarly investigation and policy driven interventions.

According to Ajayi and Adelekan (2022), the crisis of climate change in Africa converges with pre -existing vulnerabilities that include poverty, weak infrastructure and inappropriate health systems, therefore, exacerbate the risks for children. A UNICEF (2022) report establishes that 98%of African children endure shocks related to climate with vector -transmitted diseases, malnutrition and displacement emerging as critical threats. Gendered dimensions further compound these challenges as cultural norms often place girls as high risk of exploitation ,early marriages and interrupted education during the climate induced crisis thus according to Enarson (2016).For example during prolonged droughts in the Sub-Saharan Africa increased school dropouts rates among girls were noted as they were tasked with water collection hence exposing them to gender based violence and limiting their long term socioeconomic prospects(UN Women ,2020).

Zimbabwe is classified among the five main nations affected by extreme weather in Africa, thus according to (Global Climate Risk Index, 2021). According to ZimVac(2022) Zimbabwe has experienced a twenty percent decline in agricultural productivity since 2000 due to erratic rainfall and prolonged droughts .Remote communities dependent on rainfall based farming systems face acute food insecurities with child stunting rates exceeding twenty five percent in the areas prone to drought thus according to MoHCC (2021).Makoni District in Manicaland Province is vulnerable to reduction in maize yields over the past decades due to climate variability (Makoni District Development Plan ,2020).

In Ward 16 of Makoni District, climate change impacts manifests through recurrent droughts and degraded water infrastructures therefore threatening children's safety and wellbeing .According to Zimstats 2022 the survey revealed that 78percent of households in Makoni rely on unsafe water sources during the dry seasons hence increasing the risks of diarrheal diseases leading to cause of under-five mortality. Children in these communities travel long distances to fetch water reducing school attendance exposure to GBV is heightened (Chigumira et al 2021).Climate induced displacement disturbs social networks therefore leaving children vulnerable to exploitation and trauma(Save the Children ,2021).

The Zimbabwean government has launched climate adaptation frameworks such as the National Climate Change Response Strategy (NCCRS, 2020) however implementation gaps persist at the local level. Community organisations in Makoni District introduced drought resistant crops and rain water harvesting (Makoni Rural District Council,2021.However interventions focused on children remain fragmented with limited integration of children's voices in climate planning a critical oversight given their unique vulnerabilities thus according to Tanner et.al 2020.

1.3PROBLEM STATEMENT

Climate change stands as a major global challenge disproportionately affecting the most vulnerable groups particularly children in developing nations (UNICEF,2020).Rural communities such as Ward 16 Makoni District face heightening risks due to intensifying climate related disasters including prolonged droughts and erratic flooding .According to Save the Children 2021 climate change events disrupt critical infrastructure ,destabilizes food systems and compromise access to clean water and healthcare therefore exacerbating water borne diseases ,psychological distress and child malnutrition. While global research emphasizes the versatile threats of climate change towards the health and development of

children in the sub Saharan Africa particularly Zimbabwe remains limited when it leaves essential gaps in understanding context specific vulnerabilities and the mitigation strategies.

The existing body of literature examines climate impacts at regional or national scales neglecting granular analyses at local levels like ward 16,where socioeconomic inequities intersect with environmental stressors (IPCC,2022).For example whilst physical health outcomes such as malnutrition and respiratory diseases are well documented in climate vulnerable paediatric populations(World Health Organization 2017) the mental health consequences including anxiety ,depression and trauma stemming from displacement are understudied in Zimbabwe (AMREF Health Africa,2023).Consequently, gender specific differences remain overlooked .In Zimbabwe rural areas girls often bear uneven burdens during climate crises including increased domestic labour ,reduced educational attendances and early child marriages due to economic strains hence prolonging the cycles of vulnerability(UN Women,2018).

The absence of localized gender-sensitive research hinders the development of targeted adaptation strategies. The existing mitigation frameworks in Zimbabwe prioritize agricultural resilience and disaster response but lack child centred interventions addressing the issues of nutrition, psychosocial support or safety (Government of Zimbabwe, 2020).Without empirical data on ward 16s specific challenges, policymakers are bound to make general solutions which do not fit to the community's economic, cultural and environmental realities. This study seeks to address three research gaps investigating how climate induced disasters In Ward 16 threaten children's safety ,health and education both directly and indirectly. The study also seeks to examine the psychological impacts on children and differentiated risks for girls due to sociocultural norms. Lastly it seeks to identify community based interventions to enhance child resilience through participatory engagement with caregivers and educators.

1.4 RESEARCH AIM

To access the impacts of climate change on the safety and wellbeing of children in Ward 16, Mupoperi, Makoni District, Zimbabwe.

1.4.1SPECIFIC OBJECTIVES

1. To access the contribution of climate change on children's socioeconomic vulnerability in Ward 16, Makoni District.

2. To examine the effects of climate change induced vulnerability on the wellbeing of children in Ward 16, Makoni District.

3. To assess the role of the community towards mitigating climate change induced vulnerabilities on the wellbeing of children in Ward 16, Makoni District.

1.5 RESEARCH QUESTIONS

The following research questions have been developed in alignment with the study's objectives to guide the investigation:

1. How does climate change contribute to the socioeconomic vulnerability of children in Ward 16, Makoni, District?

2. What are the effects of climate change induced vulnerabilities on the physical, mental and emotional wellbeing of children in Ward 16, Makoni, District?

3.How effective are community driven initiative's in mitigating the impacts of climate change induced vulnerabilities on the wellbeing of children in Ward 16,Makoni District?

1.6SIGNIFICANCE OF THE STUDY

1.6.1. POLICY MAKERS

Policy makers can use the insights from this study to develop and implement policies that protect children from the negative outcomes resulting from changes in climate patterns. By understanding the specific vulnerabilities and needs of children in Ward 16, they can create targeted interventions and effectively allocate resources .This study can also inform national and regional strategies, ensuring that child focused climate adaptation and mitigating measures are integrated into wider climatic policies.

1.6.2. LOCAL GOVERNMENT AND COMMUNITY LEADERS

Local government and community leaders may apply the insights from this research to develop and execute localized climate resilience programs. By dealing with the unique challenges facing children in ward 16, they can increase the community's readiness and response to climate related disasters. This study will also help in mobilizing community resources and support cooperation between the local parties in fostering a secure and nurturing setting that promotes the wellbeing of children.

1.6.3. NON-GOVERNMENTAL ORGANISATIONS

Organizations focused on child protection, public health and environmental sustainability may find value in this research as it offers meaningful insights into how climate change influences the wellbeing of children. The findings can lead to the design and implementation of programs focused on children and interventions .Additionally, NGOs can use the evidence from this study

to advocate for increased funding and support for climate resilience initiatives that specifically address the needs of children.

1.6.4. SCIENTISTS AND ACADEMICS

This research can serve as a valuable reference for scientists and scholars who are interested in exploring how changing climate patterns impacts children .It adds to existing literature by offering context-specific insights and locally gathered data .By identifying gaps in current research the study encourages a deeper more interdisciplinary in-depth examination of how environmental changes influence various aspects of children's wellbeing.

1.7. SCOPE OF THE STUDY

1.7.1. GEOGRAPHIC BOUNDARIES

The investigation is limited to Mupoperi ward 16 located within Zimbabwe's Makoni District. This area is predominantly rural with the majority of households depending on small scale farming for their livelihood. The selection of this location is intentional due to its vulnerability to climate related challenges such as extended dry spells and inconsistent rainfall. These issues directly affect overall living conditions of the local population especially children. Focusing on this specific ward allows for an in-depth and place-based understanding of how climate change affects children's daily lives and offers findings that can inform both the community and decision makers at the local level.

1.7.2. TEMPORAL BOUNDARIES

This research examines the period from 2015 to 2025.The chosen ten-year span allows for the observation of recent developments and changes related to climate ramifications on child safety and wellbeing within Mupoperi Ward 16, Makoni District. By reviewing trends and events across this timeframe the research aims to formulate insightful findings about the role played by climate change on the area and propose relevant strategies that could guide future adaptation and resilience efforts.

1.8. DEFINITION OF KEY TERMS

1. Climate Change

The United Nations portrays climate change as a long-term alteration in temperature and weather patterns largely caused by human actions like deforestation and the burning of fossils (UN,2024).

Similarly,NASA explains it as a shift in the usual climate conditions such as temperature and rainfall within a given area ,occurring over extended periods (NASA Climate Kids, 2024)

2. Socioeconomic Vulnerability

According to the World Health Organization (2022) socioeconomic vulnerability refers to the set of physical, social, economic and environmental circumstances or processes that heighten the likelihood that individuals, communities, assets or systems will be adversely affected by hazards.

Similarly Spielman et al (2020) explain social vulnerability as the result of various social, cultural, economic, and political and institution dynamics that influence how different groups are affected by and recover from hazardous events.

3. Community Resilience

As outlined by the Meridian Institute (2019) community resilience refers to a community's ongoing capacity to effectively utilize its resources in coping with, enduring and bouncing back from challenging or harmful events.

Likewise the Institute of Sustainable Communities describes community resilience as the ability of a community to prepare, adapt and recover from internal and external stresses (ISC, 2015)

1.9. CHAPTER SUMMARY

This chapter has set the foundation for this study by providing an overview of the research objectives, questions and justifications. The research seeks to fill a significant gap in the understanding of how climate change threatens the safety and wellbeing of children in ward 16, Mupoperi .The following chapters will be built on this introduction, examining the literature, research methods and findings in detail.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

Changing weather patterns is a global crisis with cascading consequences on ecosystems, economies and human general wellbeing, children and adolescents due to their developmental stage and their dependence on guardians are disproportionately affected particularly in socioeconomically vulnerable regions like Sub-Saharan Africa. In Zimbabwe climate variability marked by droughts, floods and erratic rainfall exacerbates existing inequalities threatening children and adolescents health and education and long term resilience .This literature review synthesizes global, African and Zimbabwe perspectives to access how changing weather patterns contributes to children and adolescents social and economic susceptibility to climate related risks, its consequences on their general wellbeing and the role of communities.

2.2. CONCEPTUAL FRAMEWORK

The conceptual framework of the present study presents the complex dynamics of changing weather patterns, children and adolescent's well-being, and the intervening variables that influence these processes. The centre of this structure is the process of changing weather patterns which is used to describe persistent alterations in the Earth's atmospheric temperature and precipitation primarily due to human activities such as the emission of fossil fuels and deforestation (UN, 2024). The consequences of changing weather patterns are diverse such as a rise in the frequency of disasters like extreme weather events, prolonged droughts and floods that all have a significant effect on children and adolescent's living standards. The majority are particularly susceptible in places like Ward 16, Mupoperi.

In the context of changing weather patterns and its consequences on children and adolescents' one has to consider the concept of social and economic susceptibility to climate-related risks. This refers to the factors that heighten the exposure of individuals and groups to the risks of changing weather patterns. Poverty, low access to education and weak health systems play a central role in laying the groundwork for susceptibility to climate-related risks (WHO, 2022). In Ward 16, where subsistence agriculture is the source of livelihood for the majority of households the combined consequences of changing weather patterns pose serious challenges. For instance, irregular rainfall not only threatens agricultural yields but also exacerbates food insecurity hence leading to higher rates of child malnutrition.

Community resilience is another central component of this framework. The ability of people in the community to be prepared for, respond to and recover from adverse occurrences (Meridian Institute, 2019) community resilience has the potential to overcome the adverse consequences of changing weather patterns on children and adolescent's general well-being. Local initiatives such as the creation of drought-proofing crops or improved water conservation systems have the potential to make the people in the community resilient against climate stressors. However, the success of such initiatives depends largely on the active participation of people in the community members and the integration of local knowledge into resilience initiatives.

Moreover, the concept of child general well-being encompasses several dimensions including physical health, mental health, education and safety. Changing weather patterns can adversely affect these dimensions leading to increased malnutrition, psychological distress and disruption of education (UNICEF, 2021). For instance, during drought periods children and adolescents may experience malnutrition due to food shortages while frequent absenteeism from school to help with domestic chores can interfere with their education. The interaction of gender roles makes things even more complicated, as girls can bear an excessive burden in climate crises, with girls usually having added domestic workloads and fewer opportunities for education (UN Women, 2020).

This conceptual framework presumes that changing weather patterns has a direct influence on children and adolescent's general well-being by elevating social and economic susceptibility to climate-related risks and lowering community resilience. With disasters as a result of climate becoming more intense and recurrent the health and development susceptibility to climate-related risks of children and adolescents is heightened, particularly in rural areas where access to resources is already limited. By investigating these connections the study aims to contribute to an enhanced examination of how changing weather patterns impacts the welfare and security of children and adolescents in Ward 16, thereby ultimately informing policy and people in the community interventions specifically tailored to address these urgent needs.

2.3. OBJECTIVE 1: ASSESSING THE CONTRIBUTION OF CLIMATE CHANGE ON CHILDREN'S SOCIOECONOMIC VULNERABILITY.

2.3.1. GLOBAL CONTEXT

The intersection of changing weather patterns and children and adolescent's susceptibility to climate-related risks has garnered significant scholarly attention emphasizing the

disproportionate consequences on marginalized populations. (Arpin et al 2021) highlight that children and adolescents from low-income households are particularly susceptible to the adverse consequences of changing weather patterns experiencing heightened health risks and social and economic challenges. This review synthesizes findings from various studies illustrating that changing weather patterns acts as an amplifier of existing inequalities exacerbating the vulnerabilities of already disadvantaged children and adolescents .For instance the evidence indicates that children and adolescents from socioeconomically marginalized backgrounds are up to ten times more likely to face severe consequences from climate related disasters (Arpin et al 2021).This trend is particularly alarming in low and middle income countries (LMICs) where the burden of changing weather patterns related health issues is projected to be significantly higher compared to high income countries(Arpin et al 2021).The disparities in health outcomes such as increased rates of malnutrition and mental health issues underscore the urgent need for targeted interventions addressing the unique vulnerabilities faced by children and adolescents in these contexts .

2.3.2. REGIONAL CONTEXT

In the African context, the implications of changing weather patterns are further compounded by socio-political and economic challenges. The interplay between changing weather patterns, food insecurity and children and adolescent's susceptibility to climate-related risks has been extensively documented.(Kallmark 2018) emphasizes that drought is a frequent natural disaster in Africa which adversely affects child health outcomes through malnutrition which is prevalent in Zimbabwe. The study argues that unfavourable climatic conditions significantly diminish food availability and production leading to increased undernutrition among children and adolescents a critical determinant of future productivity and health .This relationship is further complicated by the social and economic conditions that underpin rural livelihoods as highlighted by (Nyahunda & M.Tirivangasi ,2019).(Drimie & Casale 2009) delve into the entangled crises of food insecurity ,poverty and health illustrating how these stressors collectively heighten the susceptibility to climate-related risks of children and adolescents in Southern Africa. The authors argue that the existing chronic food security crisis,exarcerbated by changing weather patterns has led to deteriorating livelihood conditions for many families .This situation is particularly dire for children and adolescents whose future welfare is at risk due to the compounded consequences of these stressors .The authors emphasize the need for a multi-dimensional understanding of susceptibility to climate-related risks to inform effective

policy and program responses that take into account the complex realities faced by families in the region (Drimie & Casale 2009).

2.3.3. LOCAL CONTEXT

At the local level, Zimbabwe presents unique case study of the intersection between changing weather patterns and children and adolescent's susceptibility to climate-related risks.(Maganga & Conrad Suso 2022))discuss how historical and contemporary land policies have hindered changing weather patterns coping mechanisms in communal areas leading to increased poverty and food insecurity .The authors argue that macroeconomic challenges such as hyperinflation and inadequate agricultural inputs have worsened living conditions particularly for vulnerable populations including children and adolescents. This situation is compounded by the findings of (Phiri et al 2014) who note that women often the primary caregivers face disproportionate consequences from changing weather patterns further endangering children and adolescent's general well-being .The limited adaptive capacity of women in rural Zimbabwe exacerbates the challenges children and adolescents face in securing food and other essential resource.(M.Sillah,2015) advocates for the establishment of a child centred disaster management framework in Zimbabwe ,emphasizing the critical need to address the specific vulnerabilities faced by children and adolescents during climate related disasters .The study highlights that children and adolescents are disproportionately affected by hazards such as droughts and floods which have become increasingly frequent due to changing weather patterns .(M.Sillah 2015) argues that existing disaster management frameworks often overlook the rights and needs of children and adolescents ,thereby exacerbating their susceptibility to climate-related risks. The urgency of this issue is further underscored by the findings of (Y.Wright et al 2024) who discuss the implications of changing weather patterns on health and general well-being in African communities including Zimbabwe .The authors argue that strengthening adaptive capacities and mitigating strategies is crucial for enhancing the resilience of children and adolescents and communities facing the consequences of changing weather patterns (Y.Wright et al 2024).

The literature reviews a critical intersection of changing weather patterns and children and adolescent's social and economic susceptibility to climate-related risks across global, regional and local contexts. The compounded consequences of climate related stressors necessitate a nuanced understanding of susceptibility to climate-related risks to inform effective policy responses aimed at protecting the rights and welfare of children and adolescents in the face of ongoing environmental changes.

2.4. OBJECTIVE 2: EFFECTS OF CLIMATE CHANGE-INDUCED VULNERABILITY ON THE WELLBEING OF CHILDREN

2.4.1. GLOBAL CONTEXT

The global implications of changing weather patterns on children and adolescent's health and general well-being have been extensively documented in the literature.(Xu et al 2012) assert that changing weather patterns represents a profound challenge notably affecting public health for vulnerable groups such as children and adolescents. They highlight the unique physiological and developmental characteristics of children and adolescents that render them more susceptible to climate related health risks including vector borne diseases and malnutrition .The authors emphasize that the burden of changing weather patterns disproportionately influences children and adolescents under five years of age with the World Health Organisation estimating significant morbidity and mortality associated with environmental changes .This foundational understanding establishes a critical backdrop for examining the multifaceted health risks posed by changing weather patterns on children and adolescents globally.(Arpin et al 2021)expand this notion by exploring the inequalities in health outcomes among children and adolescents affected by changing weather patterns. They argue that social and economic status plays a pivotal role in determining children and adolescent's exposure to climate related health risks with disadvantaged children and adolescents facing a double burden of changing weather patterns .This disparity highlights the urgent need for targeted interventions to address the inequities faced by low-income families in the context of climate induced vulnerabilities. The authors provide nuanced understanding of the direct and indirect consequences of changing weather patterns on child health, thus framing the discourse on child general well-being within a broader socio-economic context.(Clemens et al 2022) contribute to the global narrative by focusing on the health implications of changing weather patterns for children and adolescents and adolescents. They elucidate how natural disasters and the psychological stressors associated with changing weather patterns can lead to adverse mental health outcomes. This review underscores the importance of recognizing mental health as a critical component of child general well-being in the face of changing weather patterns thereby broadening the scope of health considerations beyond physical ailments. The findings indicate that heightened awareness of changing weather patterns can exacerbate mental health issues necessitating comprehensive strategies that encompass both physical and physiological health interventions.

2.4.2. REGIONAL CONTEXT

In the context of low and middle income countries (LMICs),(Sharpe & M Davison 2022)highlight the increasing frequency and severity of climate related disasters and their disproportionate impact on children and adolescents. They assert that children and adolescents in LMICs are particularly vulnerable due to pre-existing social and economic challenges which complicate their capacity for resilience .The authors emphasize that stressful early life events linked to changing weather patterns have long lasting consequences on mental health, underscoring the need for child specific coping mechanisms policies. This regional perspective is critical for understanding the unique challenges faced by children and adolescents in these contexts and the necessity for tailored interventions.(Datzberger et al 2023) provide further insights into the intersection of changing weather patterns and violence against children and adolescents particularly in regions like Bangladesh where natural disasters exacerbate familial stress .Their findings reveal a troubling correlation between environmental stressors and increased rates of child abuse and domestic violence .This research highlights the urgent need to address not only the physical health consequences of changing weather patterns but also the social consequences that can arise in vulnerable communities. This regional examination emphasizes the complexity of changing weather patterns consequences which extend beyond health to encompass issues of safety and security of children and adolescents.

2.4.3. LOCAL CONTEXT

In Zimbabwe, the consequences of changing weather patterns on children and adolescents are particularly pronounced. (M.Sillah, 2015) provides sobering overview of the direct consequences of climate related disasters on children and adolescents' health noting that high rates of low birth weight and stunted growth are prevalent in areas affected by drought and famine .This highlights the immediate health risks children and adolescents face in the context of changing weather patterns. The need for a child centred disaster management framework is emphasized suggesting that current policy responses may not adequately account for the specific vulnerabilities faced by children and adolescents .Furthermore the research of (Drimie & Casale 2009) illustrates the entangled crisis of food insecurity and health risks arguing that the susceptibility to climate-related risks of children and adolescents in Zimbabwe is compounded by multiple stressors including the HIV/AIDS epidemic. This multifaceted susceptibility to climate-related risks requires comprehensive policy responses that address the complex interplay between changing weather patterns, health and social and economic factors affecting children and adolescent's general well-being.

The literature reviewed illustrates a critical need for nuanced understanding of how changing weather patterns consequences children and adolescent's health and general well-being across different contexts .The intersection of global .regional and local factors highlights the complexity of addressing these challenges and underscores the importance of tailored interventions that consider the unique vulnerabilities.

2.5. OBJECTIVE 3: ASSESSING THE ROLE OF COMMUNITY TOWARDS MITIGATING CLIMATE CHANGE INDUCED VULNERABILITIES ON THE WELLBEING OF CHILDREN.

2.5.1. GLOBAL CONTEXT

The consequences of changing weather patterns on children and adolescent's general well-being are increasingly recognized as a pressing global concern. (Tanner,2015) underscores the critical role of people in the community involvement in mitigating these consequences particularly in lower income countries where children and adolescents are disproportionately affected .This is echoed by (Klein Meyers & Hardee,2017),who highlight that community based solutions are essential in responding to climate related events. Their case studies across various nations reveal that effective responses to climate challenges are often rooted in local people in the community networks and social capital, suggesting that empowering communities can significantly enhance resilience. The literature consistently emphasizes that participatory approaches where children and adolescents are engaged in decision making processes are vital for fostering resilience to climate related challenges(Tanner ,2015).In Southern Africa (Mpandeli et al 2018)explore the interconnectedness of water, energy and food resources illustrating that changing weather patterns intensifies existing vulnerabilities .The projected reductions in rainfall and the increase in extreme weather events pose significant threats to health and nutrition directly impacting children and adolescent's general well-being. This systematic approach to climate coping mechanisms highlights the necessity of integrating people in the community driven strategies that leverage local knowledge and resources to combat climate induced vulnerabilities (Mpandeli et al 2018).

2.5.2. REGIONAL CONTEXT

In Africa, the literature reveals a complex interplay between changing weather patterns and community resilience. (Nyahunda & M.Tirivangasi, 2019) discuss the challenges faced by rural communities in Zimbabwe noting that inadequate government policies hinder effective changing weather patterns coping mechanisms. Their findings indicate that communities are often left without necessary tools and information to mitigate climate ramifications which

exacerbates the vulnerabilities faced by children and adolescents. The need for improved access to climate information and early warning systems is critical for building adaptive capacity particularly in rural areas where children and adolescent's safety is closely linked to agricultural stability and environmental conditions.

(F.Chersich & Y.Wright 2019) further illustrate the role of the health sector in changing weather patterns coping mechanisms in South Africa, suggesting that health initiatives can play a pivotal role in shaping climate policies. Their systematic review highlights the importance of integrating health considerations into climate coping mechanisms strategies, which can have direct implications for children and adolescent's health and safety. The regional emphasis on health and climate underscores the need for a holistic approach to people in the community resilience where health systems are strengthened to address the multifaceted consequences of changing weather patterns.

2.5.3. LOCAL CONTEXT

Focusing on Zimbabwe (S.Grey et al 2020) examine the integration of local indigenous knowledge into coping mechanisms strategies for smallholder farmers. Their research emphasizes the importance of people in the community involvement in developing effective risk reduction strategies ,particularly in the face of climate variability .By incorporating local knowledge communities can enhance their adaptive capacity which is crucial for safeguarding the general well-being of children and adolescents who are often most vulnerable to climate outcomes .

Moreover (Tolulope, 2021) advocates for collaborative research efforts that bridge gaps between academic research and people in the community action. This approach is essential for developing policies that are informed by local realities and needs ensuring that children and adolescent's voices are included in climate coping mechanisms discussions. The call for more robust research collaborations highlights the fragmented nature of current changing weather patterns literature in Zimbabwe which often overlooks the unique challenges faced by children and adolescents in rural settings.

Lastly (Datzberger et al 2023)explore the links between changing weather patterns, environmental degradation and violence against children and adolescents underscoring the urgent need for protective measures in vulnerable communities .Their findings reveal that climate disasters exacerbates existing social vulnerabilities leading to increased risks for children and adolescents. This intersection of changing weather patterns and social issues

highlights the critical role of people in the community engagement in fostering safe environments for children and adolescents amidst growing climate challenges.

Overall, the literature illustrates a pressing need for comprehensive people in the community driven approaches to address the vulnerabilities faced by children and adolescents due to changing weather patterns. By integrating local knowledge enhancing health systems and fostering participatory decision making communities can play a pivotal role in mitigating the adverse consequences of changing weather patterns on children and adolescent's general well-being.

2.6THEORETICAL FRAMEWORK

The theoretical framework for this study incorporates Social susceptibility to climate-related risks Theory and Sustainable Livelihood Theory. These theories provide a comprehensive lens through which to analyse the consequences of changing weather patterns on children and adolescent's safety and general well-being. Both theories provide different perspectives on the environmental and socio-economic determinants of the lives of children and adolescents in vulnerable communities.

2.6.1 SOCIAL VULNERABILITY THEORY

Susceptibility to climate-related risks Theory would posit that people's or groups' exposure to harm depends on the combination of exposure to risk, risk sensitivity and adaptive capacity. It underlines that susceptibility to climate-related risks is not only a product of environmental circumstances but also of socio-economic circumstances, institutional settings and cultural contexts. The theory identifies three broad components: exposure, which refers to the level to which a people in the community is subject to climate risk; sensitivity, which refers to the level at which these risks affect the people in the community's general well-being and adaptive capacity, which is the ability of a people in the community to adapt to potential harm and respond to consequences (Adger et al, 2007).

Within the context of research susceptibility to climate-related risks Theory is particularly effective in its ability to clarify how rural communities in Zimbabwe, for instance, those in Ward 16, Mupoperi, respond to changing weather patterns. These are highly vulnerable groups to climate variability such as unpredictable rainfall and prolonged drought which directly threaten their agricultural ways of life. The susceptibility to climate-related risks of such groups is also being increased by socio-economic factors including elevated poverty rates and limited education and access to healthcare. Their adaptive capacity is thus typically low since many

families lack the knowledge and resources to employ beneficial coping mechanisms. With the application of susceptibility to climate-related risks Theory, the study can determine some vulnerabilities felt by children and adolescents in such groups, thereby informing targeted interventions that foster resilience and improved general well-being.

2.6.2. SUSTAINABLE LIVELIHOODS FRAMEWORK

The Sustainable Livelihoods framework (SLF) provides another helpful framework for analysing the ramifications of changing weather patterns on children and adolescent's well-being. The SLF is based on the premise that individuals and groups of individuals use various assets natural, human, social, physical and financial to achieve sustainable livelihoods. The SLF emphasizes the interconnectedness of these assets and the influence of external conditions, such as policies and institutions, in shaping livelihood outcomes (Scoones, 1998).

In the context of Zimbabwe, the SLF can be employed to explore how livelihoods are adapted by communities in response to climate consequences. For instance, farmers in Ward 16 may diversify their crops or alter agricultural methods to accommodate changing rainfall patterns. By examining the various assets that the communities possess and how they interact with drivers from outside, the study can gain knowledge about the strategies that enhance resilience and food security to changing weather patterns. The framework is particularly urgent since it demands integrated development strategies that are informed by environmental sustainability and social equality. By focusing on the ability and resources of communities, the SLF can provide advice on adaptive capacity and policies that are supportive of sustainable development.

2.7. CONCLUSION

This abstract condenses the literature review's major points, which include the complicated issues of children and adolescent's exposure to changing weather patterns outcomes in Ward 16 Mupoperi Makoni District, Zimbabwe, and theoretical frameworks used in the research.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the methodological framework employed to examine the effects of climate change on the safety and wellbeing of children in Mupoperi, Ward 16 located in Makoni District Zimbabwe. The chapter is systematically structured into several key sections which include an overview of the study area, its geographical and socioeconomic features, map of the study area, research design and the research approach. Additionally it details the target population, sample size, sampling methods, and data collection tools, procedures for data analysis and presentation, ethical considerations and concludes with the summary of the methodology.

3.2 DESCRIPTION OF THE STUDY

3.2.1 GEOGRAPHIC CHARACTERISTICS

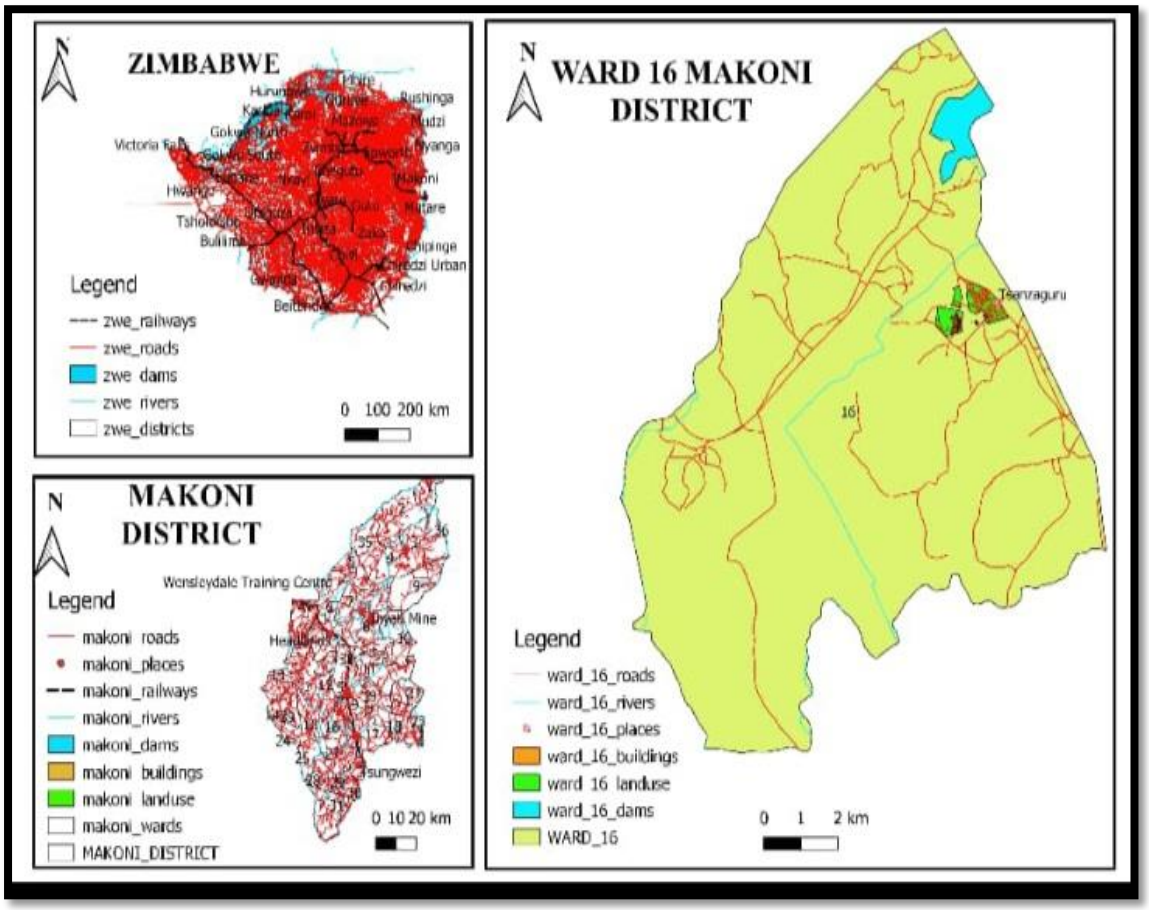
Mupoperi is located in the Makoni District of Manicaland Province north-eastern Zimbabwe .The district is characterized by a diverse landscape with varying altitudes ranging from low to high density population areas .The area is situated at an elevation of approximately 762 meters (2,500 feet) above sea level .The region is known for its fertile soils making it suitable for agriculture particularly tobacco farming .The area is also home to several historical sites and natural landmarks such as Tsanzaguru which reflects the Rozvi peoples aspirations.

3.2.2 SOCIO-ECONOMIC

Makoni District is primarily an agricultural region, while tobacco is the main cash crop. The district has a population of approximately of 288,441 people with a significant part of the population that relies on agriculture for its livelihood. The socioeconomic status of the district is characterized by a high degree of poverty and many households struggle to meet their basic needs .The districts poverty index is influenced by factors such as household size, access to economic wealth and agricultural productivity.

3.2.3 STUDY AREA MAP

Figure 1: Makoni District Map



3.3 RESEARCH DESIGN

For this study a case study research design was adopted to conduct an extensive investigation of the impacts of climate change on the safety and wellbeing of children in ward 16, Makoni District. Heale and Twycross (2017) describes a case study as a structured and focused method of inquiry that concentrates on a particular individual, group, community or unit allowing the researcher to explore multiple variables through the collection of rich detailed data. This design allows for a detailed exploration of the research topic within its real life context providing a nuanced understanding of complex issues. The adopted research design is justified for this research as it allows for a comprehensive exploration of the effects of climate change on children's safety and wellbeing within the specific context of ward 16.It provides a holistic understanding of complex issues and facilitates the identification of context specific solutions .The case study is relevant for this research as it captures the unique socioeconomic and environmental conditions of the area and the lived experiences of the community. A case study provides an opportunity to understand the intricacies and context specific details of the subject matter .Flyvbjerg (2016) argues that a case study offers valuable insights than can lead to the development of the theoretical propositions and practical interventions. This why the research adopted the case study design in agreement with the above view as it applies to the researchers topic.

3.4 RESEARCH APPROACH

The researcher used the mixed methods that is quantitative and qualitative approach. The mixed methods approach integrates both quantitative and qualitative methods to provide a comprehensive understanding of the research topic. Mixed methods research according to (Cresswell and Plano Clark 2018) is defined as an approach to inquiry that combines both qualitative and quantitative forms of data collection and analysis in a single study. More so, Johnson, Onwuegbuzie and Turner (2007) describe it as the type of research whereby the researcher combines elements of quantitative and qualitative research approaches for the broad purposes of breadth and depth of understanding and corroboration. This approach is particularly suitable for assessing the effects of climate change on the safety and wellbeing of children in Ward 16 Mupoperi Makoni District as it combines numerical data with in-depth personal insights. The mixed methods approach is of utmost importance as it allows for a comprehensive analysis of both personal experiences and numerical data hence providing a well-rounded understanding of the impacts of climate change on children's safety and wellbeing. Quantitative methods help reveal clear measurable patterns related to social and economic hardships while qualitative approaches offer deeper insight into how families

actually experience these challenges and how communities try to respond. By bringing both methods together ,researchers can overcome the limitations that come with relying on just one type of data .As noted by Tashakkori and Teddlie (2015),combining these approaches creates a more balanced and complete picture of the issue under study. Bryman (2016) also highlights that mixed methods research allows for the corroboration and triangulation of findings enhancing the validity and reliability of the study. One approach alone cannot answer all the questions that might emerge in the course of researching a topic thus according to Cresswell and Clark (2011).This is why the researcher adopted the mixed methods in agreement with the view above.

3.5 TARGET POPULATION

The target population for this study is comprised of children aged 6-17, their primary care givers, community leaders and local organisations in ward 16 Mupoperi Makoni District .This selection is based on their direct exposure to climate change impacts and their ability to provide detailed data into the objectives of the study. According to Zimbabwe National Statistics Agency (ZimStats 2022) Makoni District has a total population of approximately 245 000 people with ward 16 estimated to have 8000 residents. Children under 18 years make up 45% of Zimbabwe's rural population thus according to ZimStats 2022.Applying this ratio to ward 16, it means that approximately 3 600 are children under the age of 18 of which 2 400 are likely of the range 6-17(assuming 66% of under 18 fall into this age bracket basing on the national demographic trends). According to ZimVac 2023 children in the age group of 6-17 are socioeconomically vulnerable due to dependence on climate sensitive livelihoods (e.g. subsistence farming) and face risks such as malnutrition, disrupted education and child labour during climate shocks. Primary care givers of aged 18-65 will be involved as these individuals administer the allocation of resources for the needs of children (education, healthcare and food) and are decisive for understanding the influence of climate change in the household. This study also include village heads school development committees and local councillors are also included to this study as they play a role in disaster response and community adaptation strategies.70% of rural communities strongly relies on traditional leadership for crisis management that's according to ZimStats 2022. According to Burns and Grove (2017), the target population encompasses the entire group of participants who provide the data necessary for the researcher to collect and draw informed conclusions.

3.6 SAMPLE SIZE

Sample Size Calculation (Cochran's Formula)

Cochran's formula was utilized to calculate the sample size for children 6-17 as a way to ensure statistical reliability while maintaining feasibility. A sample size represents a subset of the overall population carefully chosen to reflect the key traits of the broader group and is examined to draw conclusions about the entire target population (Bryman 2015).

$$n = \frac{z^2 - p - q}{e^2}$$

Where

- z = 1.96 (95 percent confidence level)
- p = 0.5 (maximum variability, conservative estimate)
- q = 1-p=0.5
- e =0.13 (13 percent of margin error , adjusted to reduce sample size)

$$n = \frac{(1.96)^2 - 0.5 - 0.5 = 3.8416 - 0.25}{(0.13)^2 \qquad 0.0169} = 56.8\ (rounded\ to\ 57)$$

Final sample size

Table 1:Sample Size

Group	**Sample size**	**Sampling Method**
Children(6-17)	57	Stratified Random Sampling
Guardians	57	Simple Random Sampling
Key Informants	6	Purposive Sampling
Total	120	

3.7. SAMPLING TECHNIQUES

This study utilized the Stratified Random Sampling, Simple Random Sampling and Purposive Sampling to assess the impacts of climate change on the safety and wellbeing of children in ward 16.

3.7.1. STRATIFIED RANDOM SAMPLING

To ensure fair presentation of children aged 6-17 in the study, a stratified random sampling technique was applied .As noted by McCombes (2023),this method involves dividing the population into smaller groups or strata based on characteristics that are relevant to the study in this case age and gender was adequately included. After creating the strata, participants were randomly selected from each group using random number generators. This helped guarantee that every child within the defined population had an equal opportunity to be part of the research thereby minimizing selection bias. Moreover stratified sampling improves accuracy of the results by lowering sampling error. Lohr (2016) explains that by creating internally consistent groups the variability within each stratum is reduced which leads to more reliable findings overall. Furthermore this sampling method ensures inclusivity across different demographic segments offering a more thorough understanding of how climate change affects children from various backgrounds. Thompson (2015) also supports this approach emphasizing its effectiveness in increasing the overall representativeness of the sample.

3.7.2 PURPOSIVE SAMPLING

Purposive sampling was utilized to select six key informants who hold specialized knowledge, roles and decisions related to the welfare of children and climate change resilience in Mupoperi ward 16 Makoni. This method is also known as judgemental sampling and involves the deliberate selection of participants based on their relevance, expertise and capacity to provide in-depth insights into the research topic under discussion (Etikan, Musa, & Alkassim, 2016).Participants were identified through consultation with local leadership. These individuals were chosen as they occupy strategic roles and possess lived and institutional knowledge which is actually vital for understanding how climate change is affecting children's safety and wellbeing. Purposive sampling was especially appropriate in this context as it enabled the research to assess context specific and policy relevant data .Palinkas et al (2015) highlights that purposive sampling is ideal for qualitative inquiries aiming to explore complex

social phenomena particularly where expert testimony is required to interpret systematic challenges and community level dynamics. Moreover purposive sampling respected ethical considerations by engaging only those who were willing and had professional obligations and experience that aligned with the research objectives. This approach enhanced the credibility and trustworthiness of the findings as the data collected reflected informed perspectives from individuals embedded within the systems being studied.

3.7.3. SIMPLE RANDOM SAMPLING

Simple random sampling was adopted to select a representative sample of 57 guardians of children aged 6-17 years who participated in the quantitative survey. This probability based technique ensures that every eligible caregiver within the population had an equal and independent chance of being selected (Cresswell & Creswell, 2018).A complete list of households with children in the target age range was first compiled with the assistance of community health workers. Each household was then assigned a unique number and participants were selected using a random number generator to reduce bias. The rationale for employing simple random sampling lies in its ability to enhance the internal validity and generalizability of the findings. As emphasised by Taherdoost (2016) random sampling minimizes selection bias and supports the generation of statistically reliable and objective data. In the context of ward 16 Mupoperi this method was essential for collecting unbiased data on climate change impacts as experienced by children through their primary caregivers. Furthermore random sampling was particularly critical given the socioeconomic vulnerability of the population which could have introduced systematic biases had non probability sampling been employed. By ensuring that caregivers had an equal opportunity to participate regardless of their economic status and level of engagement with community structures this study upheld the principles of inclusivity and fairness. This method also facilitated the comparison of caregiver views with data that was gathered through other means such as focus group discussions and key informant interviews thereby enriching the study's triangulation strategy.

3.8 DATA COLLECTION TOOLS

Data collection instruments are essential tools employed by researchers to gather data necessary for addressing research questions and achieving study objectives .Examples of such instruments include questionnaires ,interviews and observations .In this study , the research adopted both quantitative and qualitative tool which the Quantitative Survey, Focus Group Discussions and Key Informant Interviews.

3.8.1 QUANTITATIVE SURVEY

Quantitative survey was utilized for 57 Guardians chosen using Simple Random Sampling .There were 30 females and 27 males. Surveys were adopted for guardians as they efficiently collect standardized data on household level impacts. The questionnaire for the guardians provided objective insights into children's health, education and resource allocation. The researcher distributed 57 questionnaires to the guardians of children aged 6-17 and they were given ample time to complete them .The questionnaire consisted of both closed ended and open ended questions. According to Moriea 2016 a questionnaire is an instrument used for collecting data.

3.8.2 FOCUS GROUP DISCUSSIONS (FDGS)

Focus group discussions were utilized for 57 children aged 6-17.Stratified random sampling was adopted. The group discussions were adopted to address objective 1 and 2 and research questions 1 and 2.The group discussions were stratified by age and gender to collect data specific to distinct groups of children the age 6-9 (n=19) ,10-13years (n=19) and lastly 14-17 years (n=19).There were Males(n=29) and Females (n=28) making a total of 57.FDGs are a qualitative research tool employed to achieve profound understanding of social issues and are commonly used conservation research thus according to Nyumba et al 2018.This research technique enables the researcher to observe how participants respond to each other's views and collectively build perspectives based on group interactions.FDGs were chosen for children as they allow children to articulate their lived experiences in a supportive and peer driven environment. Children of the age 6-9 may struggle with surveys hence participatory methods like story telling ensure engagement (Braun & Clarke 2015).A total of (6) FDGs were conducted with various selected groups as outlined in table 1, with children chosen using Stratified Random Sampling.

Table 2: Age and sex distribution for FDGS

Age Group	Type of FDG	No of Participants	No of FDGs
		57	
6-9	Boys	9	1
6-9	Girls	10	1
10-13	Boys	10	1
10-13	Girls	9	1
14-17	Boys	10	1
14-17	Girls	9	1

3.8.3 KEY INFORMANT INTERVIEWS (KIIS)

Interviews were carried out with 2 community leaders,2 District level officials and 2 health workers this were selected using the Purposive Sampling .Key informant interviews are qualitative in-depth interviews with people who know what is going on in the community. Interviews were utilized to assess the role of community towards mitigating climate induced vulnerabilities on the wellbeing of children in ward 16.Key informant interviews were utilized to collect information from wide range of people who have first-hand knowledge about the community.

3.9 DATA ANALYSIS AND PRESENTATION

The researcher used both qualitative and quantitative data analysis. Data analysis is the process of systematically applying statistical or logical techniques to describe, summarise and compare data in order to extract meaningful insights and support decision making (Cresswell 2018).Data on the effects of climate change on the safety and wellbeing of children in Ward 16 will be analysed.

3.9.1QUANTITATIVE DATA ANALYSIS

The quantitave data for the quantitative survey was analysed through the Microsoft excel and charts, graphs and tables were used to figure illustrations of quantitative data these were chosen as they ensure clarity and ease of interpretation .

3.9.2QUALITATIVE DATA ANALYSIS

The researcher used thematic analysis .Thematic analysis is a method for systematically identifying, organising and offering insight into patterns of meaning (themes) across a dataset thus according to (Braun & Clarke 2012).Thematic data analysis was used to analyse data obtained from FDGs and KIIs .Presentation of qualitative information was done in form of narratives according to the key themes that arose in the data. The researcher chose to use thematic data analysis as a method of analysing data are that it is flexible in the sense that it can produce a rich and well detailed complex account of data ,allows for subjective analysis hence taking into consideration participants views and also it has a wide range of analytic option's.

3.10 ETHICAL CONSIDERATIONS

The research ethics according to Connelly (2016) and Donley Graueholz (2012), are the generally recognized standards for the conduct behaviour of the researcher and the research subjects .These standards are professional, moral and legalistic .Neuman (2011) supports and makes reference to the idea that professional procedures and principles are foundation of ethics, helping to distinguish between unethical and ethical behaviour in research-related practices. Collecting data involves several challenges that can arise at different points in the research process. When working with children researchers must carefully address ethical considerations such as obtaining necessary permissions, securing informed consent, maintaining confidentiality and anonymity and respecting the right to withdraw from the study. A central principle in research involving children is to prioritize their welfare at all times. It is essential from the outset to ensure that the research does not cause harm to the participants.

3.10.1. OBTAINING PERMISSIONS

When conducting research involving children in Zimbabwe it is essential for researchers to follow specific ethical and procedural steps. In this particular study the researcher began by securing official authorization from the Ministry of Local Government and Public Works to carry out the research in Ward 16, Mupoperi Makoni District. Following this approval was obtained from the local ward councillor who then facilitated introductions to the village head and members of the community. Consent was subsequently requested from the parents and guardians of the children who participated in the focus group discussions. After obtaining permission from the gatekeepers the researcher sought the consent of the children .They were required to consent verbally for FDGs.

3.10.2. INFORMED CONSENT

Punch (2011) posits that informed consent involves a person voluntarily, knowingly and intelligently agreeing to participate in research without any flaws in the process. Prior to commencing the interviews, the researcher secured the participants consent .Furthermore, the researcher utilized the research documents which directed the purpose of the study, how it was to benefit the participants and possible risks as detailed in consent forms.

3.10.3. CONFIDENTIALITY AND ANONYMITY

Sarantakos (2015), denotes that anonymity entails that neither names nor identifying information like addresses are collected such that participants remain unknown .The researcher considered the ethic of confidentiality and anonymity during the study. Anonymity was ensured through the use of synthetic names such that during the transcription of data no participant's identities could be incorporated into the final data. The researcher did not reveal any personal information including names of participants and whatsoever.Confidentality was taken as the right of the respondent and an obligation or mandate for the researcher to secure information to safeguard participants from any risk.

3.10.4. VOLUNTARY PARTICIPATION

Neuman(2011) asserts that prior to initiating interviews , the researcher must ensure that participants are fully informed of the voluntary nature of their participation .Participants should be aware that they have the right to withdraw from the study at any given period ,if they wish to do so.This ethical standard was upheld by the researcher , who communicated clearly the voluntary aspect of participation to all participants .By adhering to this principle , the researcher demonstrated a commitment to respecting the autonomy and decisions of the participants .

3.10.5. AVOIDANCE OF HARM

Cresswell (2014) underscores the importance of the principle of avoidance of harm, which mandates that participants must not experience any harm or adverse consequences due to their involvement in research. Hence, the researcher exercised meticulous care to ensure that no harm was inflicted upon respondents by consciously avoiding any insensitive or harsh comments during the research process.

3.11 CHAPTER SUMMARY

This chapter focuses on the study design, research methodology, sampling techniques and study tools .The chapter went into detail about the research's target demographic, sample size and sampling technique .The next chapter will be comprised of data analysis and discussion of findings.

CHAPTER 4: DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1. INTRODUCTION

This chapter offers a detailed and academically grounded analysis of empirical data collected to assess the impacts of climate change on the safety and wellbeing of children in ward 16 Mupoperi Makoni District. The researcher adopted a mixed methods strategy combining quantitative data obtained through structured questionnaires with qualitative perspectives gathered from Focus Group Discussions (FDGS) and Key Informant Interviews (KIIs).The results are organized based on the study's specific research objectives.

4.2. RESPONSE RATE

In this study a total of 57 questionnaires were distributed to the guardians of children between the age of 6-17 years aiming to assess climate change impacts on the safety and wellbeing of children in Mupoperi ward 16 Makoni District. Out of the distributed questionnaires 48 were successfully returned yielding a a response rate of **84, 2%.**This indicates a strong engagement from the guardians. However it is important to note that 9 questionnaires were not returned which accounts to **15, 8%** of the total distributed. The reasons for the non-responded varied and while this presents a limitation the high response rate suggests that the majority of guardians were willing to participate and share their insights regarding to the topic under discussion.Mugenda(2003) states that a reaction of 72% and over is viewed as awesome and satisfactory for investigation and detailing .Hence considering this affirmation it can be denoted that 84,2% reaction rate is along these lines brilliant and palatable to make sensible and compelling ends for this study .

Table 3: Questionnaire response rate

Response category	Frequency	Percentage
Returned	48	84,2%
Non Returned	9	15,8%
Total	57	100%

4.3.DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

4.*3.1. QUESTIONNAIRE RESPONDENTS CARE GIVERS*

The dataset below in table 4 is comprised of 48 participants from a community(Mupoperi) based survey assessing climate change impacts on the safety and wellbeing of children .There is balanced gender distribution noted Males (48%) and females (52%) .No occupational homogeneity was noted. Key roles include healthcare(Nurse 18.8%),education(teacher 16.7%),farmers(14.7%),builder and informal jobs(vendor 16.7%)climate vulnerable livelihoods are detected. Most participants at least (72,9%) had secondary education hence suggesting adequate literacy for understanding climate risks, However 27,1% with only primary education may require targeted communication strategies .Below is a comprehensive demographic summary presented in a table.

Table 4: Demographic characteristics of respondents

Variable	Category	Frequency	Percentage
Gender	Female	25	52%
	Male	23	48%
Age	20-29	1	2%
	30-39	20	42%
	40-49	15	31%
	50-59	12	25%
No of children	1	8	17%
	2	10	21%
	3	4	8%
	4	9	19%
	5	6	12%
	6	11	23%
Educational level	Primary	13	27.1%
	Secondary	17	35.4%
	Tertiary	18	37.5%
Occupation	Vendor	8	16.7%
	Shopkeeper	5	10.4%
	Farmer	7	14.6%
	Teacher	8	16.7%
	Nurse	9	18.8%
	Driver	5	10.4%
	Builder	6	12.5%

4.4. THE CONTRIBUTION OF CLIMATE CHANGE ON CHILDREN'S SOCIOECONOMIC VULNERABILITY IN WARD 16, MAKONI DISTRICT.

This section analyses how climate change exacerbates socioeconomic vulnerability among children in Mupoperi Ward 16 Makoni District. Using a mixed method approach the researcher will integrate quantitative survey data from 48 guardians with qualitative insights from 6 Focus group discussions (FDGS, n=57 children) and 6 key informant interviews to provide a comprehensive understanding of how climate stressors amplify pre-existing vulnerabilities among children. Themes are derived from recurring patterns across datasets, contextualised within Mupoperi ward 16 Makoni District.

Table 5: Objective 1 observed climate changes and impacts

Variable	Response Category	Frequency	Percentage
Noticed Weather Changes	Yes	48	100%
Types of changes	Reduced rainfall Increased droughts Unusual heat	28 34 26	58.3% 70.8% 54.1%
Impacts on children	Less food Poor health Missed School	32 30 29	66.6% 62.5% 60.4%
Income	Yes	48	100%
Impact on vulnerability	Greatly increases Moderately increases Slightly increases No impact	13 6 17 12	27% 12.5% 35.4% 25%

4.4.1 CLIMATE CHANGE PERCEPTIONS AND VULNERABILITY

Understanding community level perceptions of climate change is fundamental to identifying pathways of vulnerability particularly those affecting children. This theme examines how residents perceive climatic changes and the perceived impact on child wellbeing.

As stated in table 5 all respondents (100%) acknowledged having experienced notable climatic variations. Droughts are the most cited change(70.8%) followed by reduced rainfall(58.3%) and increased temperatures (54.1%).When queried about the specific impact on children 27% felt vulnerability had increased significantly ,35.4%felt it had increased slightly ,12.50% moderately increased and 25% perceived no significant effect.

The quantitative data presented above reveal broad awareness of changing climate conditions. Yet the varied perceptions on child vulnerability indicate a gap in understanding how these changes manifests in children's daily experiences.

In elucidating these perceptions noted from the quantitative survey insights drawn from FGDs and KIIs added rich contextual understanding for instance from different focus group discussion

FDGS (10-13years, girls): A 10 year old girl noted that

"Last year the sun burned our maize. Now we eat once a day as we did not harvest enough last season."

Also from another FDGS (14-17 years, boys): A 17 year old articulated that

> *"Rains come late now and they only last for a short period of time. When I was in primary my parents used to take us to the field, they would start planting maize late October or early November and by Christmas we would have some mealie cobs to eat but now Christmas comes before the first rains and the rains has become less and less, most of the river that we used to swam in growing up have dried up due to less rainfall".*

Then moving on to key informant Perspectives: KII A stated that

> *"Droughts have intensified since the year 2019.Like 70% of families in Mupoperi ward 16 rely on rain fed agriculture hence they are facing heightened malnutrition. This isn't cyclical weather its systematic vulnerability".*

KII B also supported articulating that

> *"Over the past decade, we have observed a progressive shift in rainfall patterns shorter rainy seasons and more prolonged dry spells. This has affected families since most families in the district rely on subsistence agriculture, impacting children's nutrition and attendance in school, especially during planting and harvesting times."*

These testimonies reflect a lived reality that confirms and deepens the quantitative evidence. The alignment between community perceptions and empirical patterns affirms that climate variability is actually a recognised phenomenon. However the partial disconnect regarding its child specific implications signals a need for targeted sensitisation campaigns to elevate awareness about the indirect ways climate change undermines child resilience.

4.4.2. INCOME DISRUPTIONS AND LIVELIHOOD

In agrarian community such as Mupoperi ward 16 Makoni livelihood stability is deeply intertwined with climate variability .This theme investigates how climate induced economic shocks translate into heightened risks for children.

As shown in table 5 all participants 48/48(100%) confirmed that climate change had adversely affected their household incomes. As a direct consequences 66.6% reported children had

reduced meal frequency, 62.5% noticed an increase in illness and 60.4% cited school absenteeism due to economic strain.

These findings highlight a clear relationship between environmental shocks and declining household welfare. Children depend on adult income for food, healthcare and education bear the brunt of this instability.

Therefore corroborating the quantitative evidence above

FDG (Girls 6-9 years): A 9 year old noted that

"*My father stopped sending us to school sometimes when there is no money from maize"*

Another FGD (Girls 10–13 years): A 11 year old girl articulated that

> *"Sometimes the heat is too much I cannot even walk to school the ground will be hot and I do not have shoes so I end up having blisters on my feet meaning that I will have to miss school and at times I also feel tired and there is no water at home. Our parents also say that crops are drying."*

Also another insight from FGD (Boys 14–17 years): A 14 year old stated that

> *"There are times when we only eat once a day. Our parents can't find enough work or food during the dry periods. It also becomes hard for us to concentrate at school."*

Then from KIIs Perspective: KII A noted that

> *"The rains now come late or don't come at all, and people harvest almost nothing. Children now go to bed hungry and are less active at school. In extreme cases, some parents even fail to pay school fees as most households depend on income that they would have gained from agriculture produce hence when there is less rain it clearly means that there is a decline in income gained"*

KII B articulated that

> *"When families go without income of food we start seeing children come with issues like malnutrition, fatigue and dehydration.Doughts dry up shallow wells and there is also reduction of meal frequency at home. It's all connected".*

KII C also stated that

"Some children drop out because their families cannot afford fees, uniforms or food. Teachers report that students come to class and struggle to focus".

And lastly another KII Perspective: KII D stated that

"Some children drop out because their families cannot afford fees, uniforms or food. Teachers report that students come to class and struggle to focus".

Therefore such expressions reinforce the quantitative findings with compelling experiential depth. The interlinkage between climate variability, economic precocity and child vulnerability in unmistakable .Effective policy responses must include climate resilient income generating programmes along with social protection schemes that shield children from the immediate shocks of livelihood failure.

4.5. THE EFFECTS OF CLIMATE CHANGE INDUCED VULNERABILITY ON THE WELLBEING OF CHILDREN IN WARD 16, MAKONI DISTRICT.

Children are highly sensitive to environmental stressors and climate change presents a multi-dimensional threat to their wellbeing affecting not only their health and nutrition but also their emotional stability ,education and physical security .In rural settings like Ward 16 of Makoni District where socioeconomic vulnerability is already high climatic stressors such as prolonged heat, dry spells and water scarcity intensify existing risks .This section accesses how climate induced challenges are impacting the overall wellbeing of children by triangulating descriptive statistical data with qualitatively analysed insights from KII and FGDs.

Table 6: Objective 2 effects of climate induced vulnerability

Variable	Categories	Frequency	Percentages
Health deterioration	Increased illness(Yes)	48	100%
Observed illness	Diarrhoea	29	60.4%
	Malnutrition	32	66.6%
	Heat exhaustion	28	58.3%
Psychological stress	Signs observed (Yes)	31	64.6%
	No signs observed	17	35.4%
School absenteeism	Missed school	25	52%
	No misses	23	48%
Reasons for missing school	Poor roads	19	39.5%
	Hunger	20	41.6%
	Illness	14	29.1%
	Family chores	19	39.5%

4.5. 1: PHYSICAL HEALTH DETERIORATION

As climate shocks compromise food and water systems the resulting health risks for children actually intensifies. This theme focuses on the physical manifestations of climate induced vulnerability.

As shown in the table 6 above every respondent observed illness among children 48 guardians reported increased child illness during extreme weather .Specifically identified 66.6% identified malnutrition,60.4% diarrhoea and 58.3% heat exhaustion as the most prevalent conditions.

The quantitative data presented above point to a severe health burden linked to environmental degradation. Children's health is particularly sensitive to changes in food quality and water access.

The qualitative data from FDGs and KIIs will further complement and confirm the quantitative findings above

KII Perspective: KII C articulated that

> *"In recent years we have recorded more children coming with diarrhoea especially during long dry spells .Water sources dry up and families resort to unsafe water. Malnutrition cases also rise when harvests are poor. Children come to the clinic looking weak and some of them even faint during consultation"*

Also another KII B stated that

> *"The pattern is clear. When the heat I intense children fall ill more often. Most illnesses are water related and nutrition related .Poorer families suffer more and that means children suffer first".*

Then another supporting evidence from FGD (Boys aged 10–13 years): A 12 year old noted that

> *"When it gets very hot, I start feeling dizzy. One time I didn't go to school for three days because I was vomiting and had a headache. My younger brother also got sick from drinking dirty water after the borehole dried up."*

Another FDG (6-9 years) view: A 7 year old denoted that

> *"My brother vomits after drinking dam water .Nurse said its cholera .During heatwaves I also get heat rush on my forehead and miss school for clinic queues".*

The convergence of quantitative and qualitative evidence confirms that children's physical wellbeing is deteriorating under climate stress. Health services in rural areas must be strengthened with resources to address predictable climate linked health issues.

4.5.2: PSYCHOLOGICAL DISTRESS

Climate induced stress extends beyond the physical to emotional and psychological wellbeing .This theme explores how recurring climate shocks are shaping children's mental wellbeing.

As stated in table 6 nearly two thirds of the respondents (64.6%) reported that children exhibited signs of psychological distress such as anxiety, social withdrawal and persistent sadness.

Emotional strain among children is becoming more visible as they grapple with hunger, displacement and disrupted routines .These symptoms are likely underreported due to limited community capacity to detect and address mental health.

The FDGs and KIIs insights below provided additional support for the quantitative results shown above.

KII Perspective: KII B articulated that

> *"There's growing psychological stress among children especially when they're sent home due to unpaid school fees or miss meals. We've seen children become withdrawn or anxious when the weather turns hostile. Even teachers say children seem distracted during hot spells or after strong storms*."

Another KII Perspective: KII C stated that

"Some children express fear when they see dry fields. They associate the dry land with hunger .It creates a silent stress that many adults ignore".

KII D also noted that

"Bedwetting and nightmares increased among 6-9 year olds. In 2023 five teenagers attempted suicide after livestock losses. Children actually internalize household stress as self-blame".

Moving on to FGD (Girls aged 10–13): A 10 year old noted that

"When it's too dry and we have no food, I feel sad and worried. I can't even think properly in class".

Another FGD (Boys aged 14–17): A 15 year old stated that

"Sometimes the weather makes you feel hopeless. You can't help your parents with anything. It's like you are failing as a boy."

The mental wellbeing of children is an emerging concern that requires urgent attention.Intergrating psychological support into school and community health systems is essential to equip children with the resilience to navigate an uncertain climate future.

4.5. 3: INTERRUPTED EDUCATION AND LOSS OF LEARNING OPPORTUNITIES

School participation is a key pathway to social mobility .This theme examines how environmental disruptions are interfering with children's right to education.

According to table 6 above it was found that 52% of children had missed school, with the leading causes being hunger (41.6%), poor infrastructure (39.5%), illness (29.1%) and family chores (39.5%).

These findings illustrate a multifaceted threat to education where basic needs compete with the right to learn. For many households, school attendance becomes conditional on food availability and household labour demands.

These quantitative results above were further validated through FGDs and KIIs

KII Perspective: KII B offered sobering insight

> *"It's really heartbreaking.Girls stop attending school in order to fetch water for home use and care for their younger siblings whilst parents looks for food. Boys are sent to do piece jobs when crops fail in order to help boost income. Education becomes a luxury during crisis seasons".*

Another KII Perspective: KII D stated that

"Many children have dropped out altogether or attend irregularly. When there's no food or income many families prioritize survival over school".

Also another view KII Perspective: KII F articulated that

"Attendance drops in drought period. Girls quit for early marriages whilst boys chase informal mining jobs (chigweja)".

Moving on FGD (Girls aged 6–9: A 7 year old stated that

"We stop going to school when it's too hot because there's nothing to eat. I feel ashamed going to school hungry my stomach makes funny sounds."

Also another view FGD (Girls aged 10-13): A 13 year old noted that

"I fetch water 2km away from my homestead daily since our well dried .When I arrive to school late, teacher sends me back home saying I'm late that much".

Lastly FGD (Boys aged 14–17): A 14 year old articulated that

"During planting season, some of us skip school to help in the fields. But when rains fail, all that effort is wasted and you will be behind on many topics in different subjects."

The findings expose how climatic conditions create cumulative learning disadvantages for children. Policies must prioritise inclusive education measures such as school meals, flexible schedules and menstrual hygiene management in order to mitigate climate related absenteeism.

4.6 THE ROLE OF THE COMMUNITY TOWARDS MITIGATING CLIMATE CHANGE INDUCED VULNERABILITIES ON THE WELLBEING OF CHILDREN IN WARD 16, MAKONI DISTRICT.

This section presents a comprehensive analysis of community driven mitigation strategies addressing climate vulnerability among children in Mupoperi ward 16.Through triangulation of quantitative survey and qualitative survey from KIIs and FGDs the researcher will evaluate three interconnected dimensions which are institutional support systems, indigenous copying mechanisms and systematic intervention gaps .This approach allows a holistic understanding of how formal and informal systems interact to protect or fail to protect child wellbeing under worsening climatic stress.

Table 7: Objective 3 mitigation strategies and resource gaps

Variable	Categories	Frequency	Percentage
NGOs helping	Yes	48	100%
Organizations availability	FACE	31	64.5%
	FACT	34	70.8%
	DAPP	37	77%
	WORLD VISION	34	70.8%
Aid effectiveness	Very helpful	16	33.3%
	Somewhat helpful	14	29.1%
	Not helpful	18	37.5%
Resource Gaps	Food	28	58.3%
	Clean water	25	52%
	School supplies	31	64.5%
	Health services	29	60.4%

4.6. 1: COMMUNITY AND ORGANIZATIONAL SUPPORT STRUCTURES

This theme assesses the availability and perceived effectiveness of community based and NGO led initiatives interventions that aim to address the needs of children affected by climate related challenges.

As articulated in table 7 all households (100%) reported access to at least one support organisation. Dominant NGOs providers are FACE, FACT, WORLD VISION and DAPP.In terms of perceived effectiveness 33.3% rated interventions as very helpful while 29.1% found it somewhat helpful and 37.5% deemed them not helpful.

These figures suggest that although NGO activity is visible its effectiveness is mixed .A significant proportion respondents (37.5%) feel that interventions are not addressing core vulnerabilities.

Insights from key informants supported mixed perceptions .During an interview KII C stated that "*NGOs helped install solar boreholes and introduced feeding programs. These help but they do not reach every intended audience".*

In another interview KII D remarked *"They come with good ideas but they don't consult us .So the projects are short-lived".*

Also from a focus group discussion with children aged (10-13years girls): A 12 year old girl shared "*We eat once a day at school when there is food but sometimes we skip when it doesn't come".*

Community and organizational interventions are critical pillars in reducing climate induced hardships .However effectiveness is undermined by limited geographic coverage and inconsistent delivery .Not all households benefit equally hence leaving some children exposed. These findings point to the need for inclusive planning, broader coverage and consistent resource allocation.

4.6.2: FRAGMENTED IN SERVICE DELIVERY

This theme examines the lack of coordination among various NGOs and the effects of fragmented planning service delivery on children.

Despite the 100% acknowledgement of NGO presence 37.5% of respondents believed services were ineffective and 33.3% deemed them very helpful

These results imply a mismatch between interventions design and actual needs on the ground. Fragmentation may lead to duplication or exclusion explaining the dissatisfaction or exclusion hence explaining the dissatisfaction expressed by many respondents.

The qualitative data from FDGs and KIIs complemented and confirmed the quantitative findings started above

In an interview KII D stated that

> *"NGOs work in disconnected silos FACE handles agriculture, WORLD VISION does education and then there is DAPP which focuses on technical skills and then lastly there is FACE which deals with health and education too. This fragmentation leaves critical nexus needs unaddressed".*

In another interview KII F also articulated that

> *"Our mapping shows 40% of households receive duplicate aid while 30% get nothing. Resources are allocated by donor mandates not community needs".*

In another interview KII C noted that

> *"While some schools and clinics receive aid it's not uniform. Some children in the outer parts of the ward 16 are still left behind. The intentions are there but logistical constraints are hindering the full implementation of the programs*".

KII A also stated that

> "*Traditional leaders are trying. But without consistent government support, we cannot reach everyone .A number of children still miss out on food, healthcare and clean water".*

Moving on to FGDs (Boys aged 10-13): A 13 year old boy articulated that

"We only hear that some places get help. We don't see anyone coming where I stay. I think elders forget us because where I leave its very far away from others there are only about 4 houses spaced in my area".

Also from FDG Boys 14-17 years: A 15 year articulated that

"*World Vision paid school fees for one term then they disappeared .When drought continued they blamed funding gaps. How can we trust such broken promises?"*

Then lastly another insight from FGDs (14-17girls): A 14 year old articulated that

"FACE gave us drought tolerant seeds but no training on dryland farming .When the seeds failed they took the blame on us .We need permanent water solutions not temporary seeds every drought season".

Fragmentation limits the sustainability of interventions and can breed inequality.Childrens wellbeing requires holistic and coordinated efforts .Without shared databases or unified planning structures services risk redundancy or omission. There is a pressing need for integrated frameworks that align NGO efforts with local governance strategies.

4.6.3: RECOMMENDATIONS AND CALLS FOR LONG TERM SUPPORT

This final theme reviews what community members and children believe should be improved. These ideas offer a roadmap for more inclusive and impact community support systems that address long term resilience not just short term goals.

The quantitative findings in table 7 were corroborated by the FGDs and KIIs

KII Perspective: KII D articulated that

"We need sustainable solutions like solar-powered boreholes in schools and also mobile clinics .Short term aid helps but it doesn't build long term resilience .Children need reliable services all year round to ensure their safety and wellbeing".

KII C also noted that

"Consistent school meals, clean water sources and mobile clinics are a need and they must be permanent not just once off donations. Children need protection on a daily basis".

Also KII A stated that

"More learning materials, better infrastructure in schools would go a long way .Children must have an upper hand in planning"

KII E articulated that

"90% of water points need rehabilitation. Children walk 6km daily missing school. We have documented 41% of pupils with waterborne diseases yet mobile clinics remain unfunded"

KII F also denoted that

"Community submitted 23 water project requests in 2023.Only 2 were funded while 72% of NGO budgets went to seed programs which failed consecutively".

Moving on to the FDG views (Girls aged 14-17): A 16 year old noted that

> *"We need sanitary wear, soap and food sometimes I miss class especially during my menstruation days due to fear of smelling bad among my peers because at times I resort to using my old clothes as sanitary wear so I don't feel comfortable as cloth smell bad and gets wet fast I also fear spoiling. Sometimes promises are made that we will be given sanitary wear but in the end we don't get anything".*

Another insight from FDG (Boys 14-17): A 15 year old stated that

> *"I wish that the government hear us and drill solar powered boreholes in schools so that we won't have to walk a thousand miles to fetch water ".*

Lastly an insight from FDG (Boys 10-13).A 13 year old articulated that

"We just need one deep borehole at school .Instead politicians bring water bowsers during elections. Two months down the line were back to drinking from the mud river".

Community members and children are clear about their priorities highlighting the need for practical, child focused solutions .Their input is valuable for shaping future interventions. The alignment between community perspectives and actual needs indicates that more participatory planning could significantly enhance the relevance and success of development initiatives.

4.7. DISCUSSION OF FINDINGS

The data presented in the objective findings provide compelling evidence that climate change is a significant amplifier of children's socioeconomic vulnerability in Mupoperi Ward 16. All respondents confirmed noticeable changes in local weather patterns, including droughts, erratic rainfall and extreme heat. These perceptions echo global trends discussed in the literature such as those by Arpin et al. (2021) who emphasized how shifting climatic conditions exacerbate existing inequalities among young individuals. The quantitative results highlighting reduced food availability, missed schooling and deteriorating health converge with global assertions by the WHO (2022) and UNICEF (2021), which establish that climate-related stressors heighten exposure to risks among children in low-income settings. Locally, the testimonies from children and key informants affirmed that late rains and crop failures reduce family income leading to food insecurity and school absenteeism. These findings support Drimie & Casale's (2009) work in Southern Africa which associates climate variability with deteriorating livelihoods and child welfare. Framed within the Social Vulnerability Theory, the children's increased risk is not merely a function of environmental exposure but also of their socioeconomic position. Families in Mupoperi Ward 16 lack robust coping mechanisms and adaptive capacity. They are highly reliant on rain-fed agriculture and when this collapses the first casualties are children skipping meals, dropping out of school or becoming ill. This pattern of vulnerability aligns with what Adger et al. (2007) described: vulnerability is shaped by exposure, sensitivity and a community's capacity to adapt. The Sustainable Livelihoods Framework (Scoones, 1998) also finds strong relevance. As food and financial assets decline

due to climate stress, families reallocate scarce resources often to the detriment of children's education and nutrition. The empirical data clearly illustrate that children are not passive recipients but are deeply entangled in their household's survival strategies bearing the consequences of climate-driven livelihood disruptions.

The second objective focused on how environmental stressors affect children's physical, emotional and educational wellbeing. Chapter 4 data showed that 100% of respondents observed increased illness in children with diarrhoea, malnutrition and heat exhaustion being most prevalent. Additionally, nearly 64.6% reported signs of psychological stress in children, and over half reported school absenteeism. These findings align with international studies. Xu et al. (2012) and Clemens et al. (2022) emphasized that children are physiologically and emotionally more susceptible to climate-induced health challenges. The experiences from Ward 16 reaffirm this children fainting from dehydration suffering from diarrhoea due to poor water quality, or becoming distressed when household livelihoods collapse. The qualitative accounts amplify this. Children reported feeling dizzy, hopeless or ashamed when going to school hungry. Girls missed school during menstruation due to lack of sanitary products a pattern also identified in UNICEF (2021) reports. Key informants spoke of students struggling to focus appearing withdrawn or quitting school altogether. These impacts must be understood holistically. Psychological trauma is an invisible yet potent consequence of environmental stress, a point underscored by Sharpe & Davison (2022) and Datzberger et al. (2023). Emotional instability due to hunger, disrupted schooling or fear of drought is not peripheral it is central to child wellbeing. Children in Ward 16 are growing up in an environment that is unstable and unpredictable shaping not only their health but their worldview and self-worth. Educationally, the data confirmed that environmental disruption undermines learning continuity. From water collection chores to missing school during planting seasons children's right to education is compromised. This pattern is consistent with findings by Drimie & Casale (2009), who noted that education is often the first casualty when families enter survival mode.

The third objective evaluated how well community and institutional efforts are supporting children amid climate challenges. Findings showed that although 100% of respondents acknowledged NGO presence, only a third rated their support as very helpful while 37.5% deemed them unhelpful. The fragmentation in service delivery and misalignment with community needs emerged as critical gaps. This reflects Klein Meyers & Hardee's (2017) assertion that climate resilience is most successful when grounded in local participation and tailored to real needs. Key informants noted that while NGOs offered food, water or school

supplies services were inconsistent and often failed to reach the most remote or vulnerable children. The lack of coordination between FACE, World Vision and other organizations left critical service gaps. Community members offered grounded practical suggestions: boreholes in schools, permanent school feeding programs, mobile clinics and menstrual hygiene support. These align with the principles of the Sustainable Livelihoods Framework which emphasizes the importance of accessible services and equitable asset distribution. The findings also echo the calls by Sillah (2015) and Tolulope (2021) for more inclusive child-centered policy designs in rural Zimbabwe. Moreover, the testimonies reflect an erosion of trust in NGOs due to short-term programming and unmet promises. The literature warns of this donor-driven mandates, as noted by Datzberger et al. (2023), often neglect the nuanced realities of beneficiaries. Without participatory planning and continuity, interventions may do more harm than good. The gaps in systematic support also reinforce the need to empower community based resilience. Traditional leaders, parents, and even children themselves offered actionable insights. Their inclusion is not optional it is foundational. As Mpandeli et al. (2018) argue climate adaptation must involve local knowledge especially where institutional support is weak.

4.9. CHAPTER SUMMARY

This chapter has presented the empirical findings of the research, bringing out the role played by climate change in exacerbating the socioeconomic vulnerabilities of children in Ward 16, as well as their wellbeing. The role played by the community in responding to the vulnerabilities has been brought out, with the strengths and limitations of community interventions being emphasized. The debate has underscored the need for all-encompassing strategies that address the multilateral impacts of climate change on children, setting their voices at the centre of climate adaptation measures. The subsequent chapter will present the conclusion that emanates from these findings and provide policy and practice suggestions.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

This final chapter encapsulates the essence of the study by succinctly revisiting its key findings concerning the influence of climate change on the wellbeing and safety of children in Mupoperi Ward 16, Makoni District. Grounded firmly in the theoretical foundations and empirical insights established in the preceding chapters this section aims to distil the study's primary discoveries in relation to its specific objectives. Following this synthesis, a critical conclusion is drawn that reflects on the broader implications of these findings within both local and scholarly contexts. Finally, targeted recommendations are presented to inform policymakers, guide community practice and stimulate further academic inquiry. This chapter is crafted with a view to demonstrating deep analytical engagement and contributing meaningfully to the discourse on climate vulnerability and child welfare in rural Zimbabwe.

5.2. SUMMARY OF KEY FINDING

The research reveals that climate variability manifesting in irregular rainfall patterns, extended droughts and other extreme weather events has intensified the precarious livelihoods of households in Mupoperi Ward 16. The agrarian-dependent community has borne the brunt of these changes leading to diminished crop yields and income instability. Consequently, the household's capacity to secure essential needs for children has been severely compromised. This economic fragility exposes children to heightened risks including food scarcity, malnutrition and disruptions in their developmental trajectory. Community testimonies underscore an acute awareness of the escalating hardships attributed to climatic fluctuations highlighting the direct linkage between environmental stressors and worsening child vulnerability.

Beyond economic constraints, the harsh realities brought about by climate disruptions permeate multiple dimensions of child wellbeing. The study's qualitative findings emphasize that children face increased exposure to health challenges such as malnutrition and waterborne diseases, exacerbated by limited access to adequate healthcare services. Educational outcomes are similarly affected with many children either withdrawn from school or missing significant learning time due to familial economic pressures or displacement caused by environmental shocks. Moreover, psychosocial stress arising from uncertainty and climate-related trauma emerges as a significant concern further threatening children's holistic wellbeing. These

intersecting vulnerabilities underline the complexity and depth of climate change's impact on the younger population.

Despite facing substantial challenges, the community (Mupoperi) in Ward 16 demonstrates notable resilience through localized coping and adaptive mechanisms. Indigenous knowledge and communal cooperation underpin a variety of strategies including water conservation initiatives adoption of climate-resilient farming techniques and informal social safety nets aimed at protecting vulnerable children. These grassroots approaches while commendable reveal limitations in scale and sustainability underscoring the necessity for more robust institutional support. The findings advocate for enhanced synergy between community efforts and formal structures to build adaptive capacity and secure sustainable improvements in children's wellbeing.

5.3. CONCLUSION

The findings of this study reinforce the urgent reality that climate change is not a distant threat but a lived experience for children in Zimbabwe's rural areas .It is multidimensional in nature undermining food security, access to clean water, health services, education and emotional wellbeing. The situation in ward 16 is emblematic of broader systematic gaps where national climate adaptation strategies fail to integrate child-centred approaches .The disproportionate impact on girls further underscores the need for gender sensitive programming. Despite some promising community led initiatives, the lack of coordination, limited resources and poor policy implementation impede meaningful change. The study concludes that without immediate, holistic, inclusive interventions, the rights, safety and future prospects of children in climate affected areas like Mupoperi ward 16 remain gravely compromised.

5.4. RECOMMENDATIONS

5.4.1. POLICY MAKERS

Integrate child-focused modules into the National Climate Change Response Strategy and Disaster Risk Management Frameworks. Prioritize Ward 16 and similar rural districts in budget allocations for climate resilient infrastructure that consists of (e.g. easy water access, school meals. Develop gender sensitive policies that also address the unique problems and burdens that girls face during climate shocks**.**

5.4.2. TO LOCAL GOVERNMENT AND COMMUNITY LEADERS

Scale up community gardens, school feeding schemes and climate safety education across all the parts of the ward. Establish monitoring committees to evaluate the impact of interventions

on child wellbeing. Facilitate local partnerships with NGOs and development agencies for capacity building.

5.4.3. TO NGOS AND DEVELOPMENT PRACTITIONERS

Design integrated programs that address physical, educational and psychological wellbeing of children in rural climate vulnerable areas. Provide training for teachers, caregivers and health workers on climate adaptation with a focus on child safety. Offer menstrual hygiene support for the adolescent girls in order to reduce absenteeism during climate disruptions.

5.4.4. TO FUTURE RESEARCHERS

Further research is needed on long-term psychological impacts of climate stressors on children in rural Zimbabwe. Studies should explore the efficacy of indigenous climate adaptation strategies when integrated with formal child protection systems. Comparative studies across wards or districts could strengthen the evidence base for targeted policy intervention.

5.5. CHAPTER SUMMARY

This chapter synthesized the findings of the study in alignment with the three research objectives. It drew attention to the profound and layered impacts of climate change on children in ward 16, with special emphasis on socioeconomic deprivation, health vulnerabilities and emotional toll. The chapter concluded that while community resilience initiatives exist, they remain insufficient and unevenly distributed .A practical context sensitive resilience framework was proposed with child centric and participatory principles at its core. The recommendations offered are intended to inform future policy, improve practice on ground and inspire further academic inquiry ensuring that no child is left behind in the climate crisis.

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APENDICES

APENDIX A

QUESTIONNAIRES (FOR CAREGIVERS)

SECTION A: DEMOGRAPHIC INFORMATION

1. Age of respondent { }

2. Gender: Male { } Female { }

3. Number of children { }

4. Occupation {……}

5. Education level: None {…..}Primary {…..}Secondary {…} Tertiary {…}

SECTION B: CLIMATE CHANGE AND FAMILY LIFE

6. To what extent does climate change increase vulnerability?

Greatly increases vulnerability {.....} Moderately increases vulnerability {.....} Slightly increases vulnerability {.....} No impact on vulnerability {.....}

7. Have you noticed any changes in the weather in recent years? Yes {…..}No {….}

8. If yes, what changes have you noticed? (Tick all that apply)

Less rainfall {…} More droughts {…} Unusual heat {…}.Flooding {…}

9. Have these changes affected your ability to grow food crops and earn income?

Yes {…..}No {…..}

10. How has this affected your children's daily needs?

Less food {….} Poor health {….} Missed school {….} others {….}

SECTION C: CHILDREN'S HEALTH AND SAFETY

11. Have your children suffered more illnesses during extreme weather? Yes {….} No {….}

12. What illnesses have you observed? (Tick all that apply)

Diarrhoea {….} Malnutrition {….} Heat exhaustion {....} Others {…}

13. Have your children shown signs of stress or fear during droughts or storms? Yes {….} No {…..}

14. Do your children miss school more frequently during certain seasons? Yes {…..}No {…}

15. Why do they miss school?

Poor roads {....} Hunger {…..}Illness {….} Family chores {….} others {….}

SECTION D: COMMUNITY ACTION AND SUPPORT

16. Is there any community group, church, or NGO helping children during climate related challenges? Yes {…..}No {….}

17.If yes, which organizations or groups

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18. How helpful are these efforts in your opinion?

Very helpful (….) somewhat helpful (….} Not helpful (….}

19What kind of support would help children more during climate challenges?

Food {…..}Clean water …} School supplies {…} Health services {…} Others {….}

CLOSING QUESTION

20.Do you have any suggestions for leaders to improve children's safety and wellbeing in the face of climate change?

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APENDIX B

FOCUS GROUP DISCUSSIONS GUIDE

SECTION A: DAILY LIFE AND CLIMATE CHANGE

1. Do you remember a time when it was too hot, too dry or raining too much? What happened?

2. How do such weather changes affect your ability to go to school or help at home?

3. Have you experienced food shortages or water problems at home?

4. To what extend do you think climate change increases vulnerability?

Greatly increases vulnerability

Moderately increases vulnerability

Slightly increases vulnerability

No impact on vulnerability

SECTION B: WELLBEING AND EMOTIONS

5. Have you or your friends become sick during very hot or dry seasons?

6. How do you feel when you can't go to school because of the weather?

7. Are you scared during heavy rains or storms? What do you do?

SECTION C: SAFETY AND COMMUNITY SUPPORT

8. Are there places you feel safe when the weather is bad?

9. Are there adults, teachers or leaders who talk to you about how to stay safe during droughts or floods?

10. What do you think adults or the government should do to help children like you?

CLOSING QUESTION

11. What advice would you give to leaders about protecting children from climate problems?

APPENDIX C

KEY INFORMANT INTERVIEWS GUIDE

SECTION A: UNDERSTANDING CLIMATE CHANGE AND ITS EFFECTS

1. What major climate related changes have you noticed in Ward 16 over the past 5 to 10years?

2. In your opinion, how have these changes affected local livelihoods and family income?

3. How have these climate challenges impacted children's access to food, water, education and health services?

4. To what extend do you think climate change increases vulnerability?

Greatly increases vulnerability

Moderately increases vulnerability

Slightly increases vulnerability

No impact on vulnerability

SECTION B: CHILD WELLBEING AND VULNERABILITY

5. Have you observed any increase in health problems among children that could be linked to climate changes (e.g. malnutrition, heatstroke, diarrhoea)?

6. Are children showing signs of emotional or psychological stress caused by environmental changes such as displacement or hunger?

7. What do you think are the most serious risks children in this community face due to climate change?

SECTION C: COMMUNITY ACTION AND SUPPORT

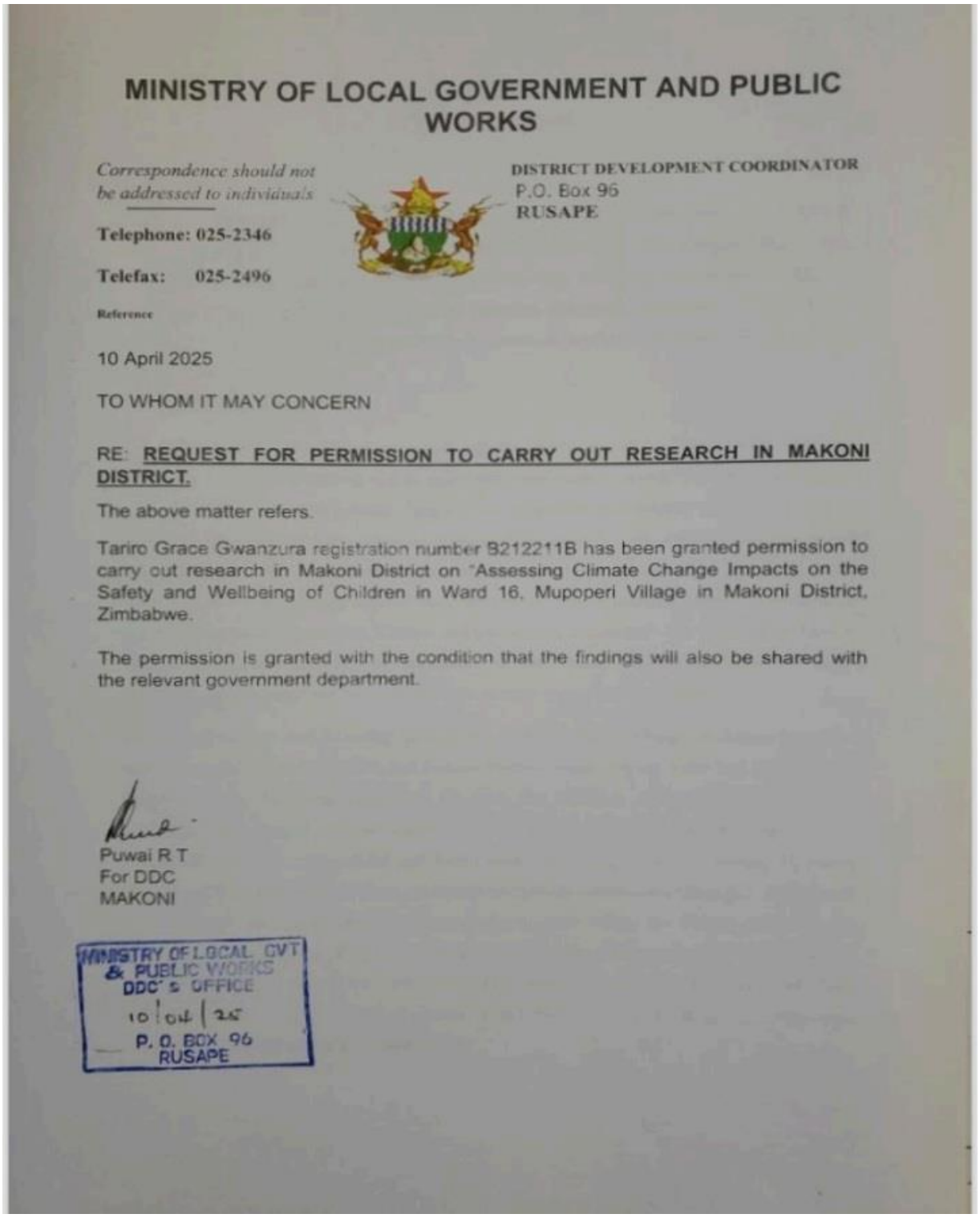
8. What steps has the community taken to protect children from negative effects of climate change?

9. Are there any programs (by government, NGOs or traditional leaders) that support children in emergencies like drought or floods?

10. How effective do you think these initiatives have been?

11. What more can be done by the community or external organizations to reduce climate-related harm to children?

APENDIX D



MINISTRY OF LOCAL GOVERNMENT AND PUBLIC WORKS

Correspondence should not be addressed to individuals

DISTRICT DEVELOPMENT COORDINATOR
P.O. Box 96
RUSAPE

Telephone: 025-2346

Telefax: 025-2496

Reference

10 April 2025

TO WHOM IT MAY CONCERN

RE: **REQUEST FOR PERMISSION TO CARRY OUT RESEARCH IN MAKONI DISTRICT.**

The above matter refers.

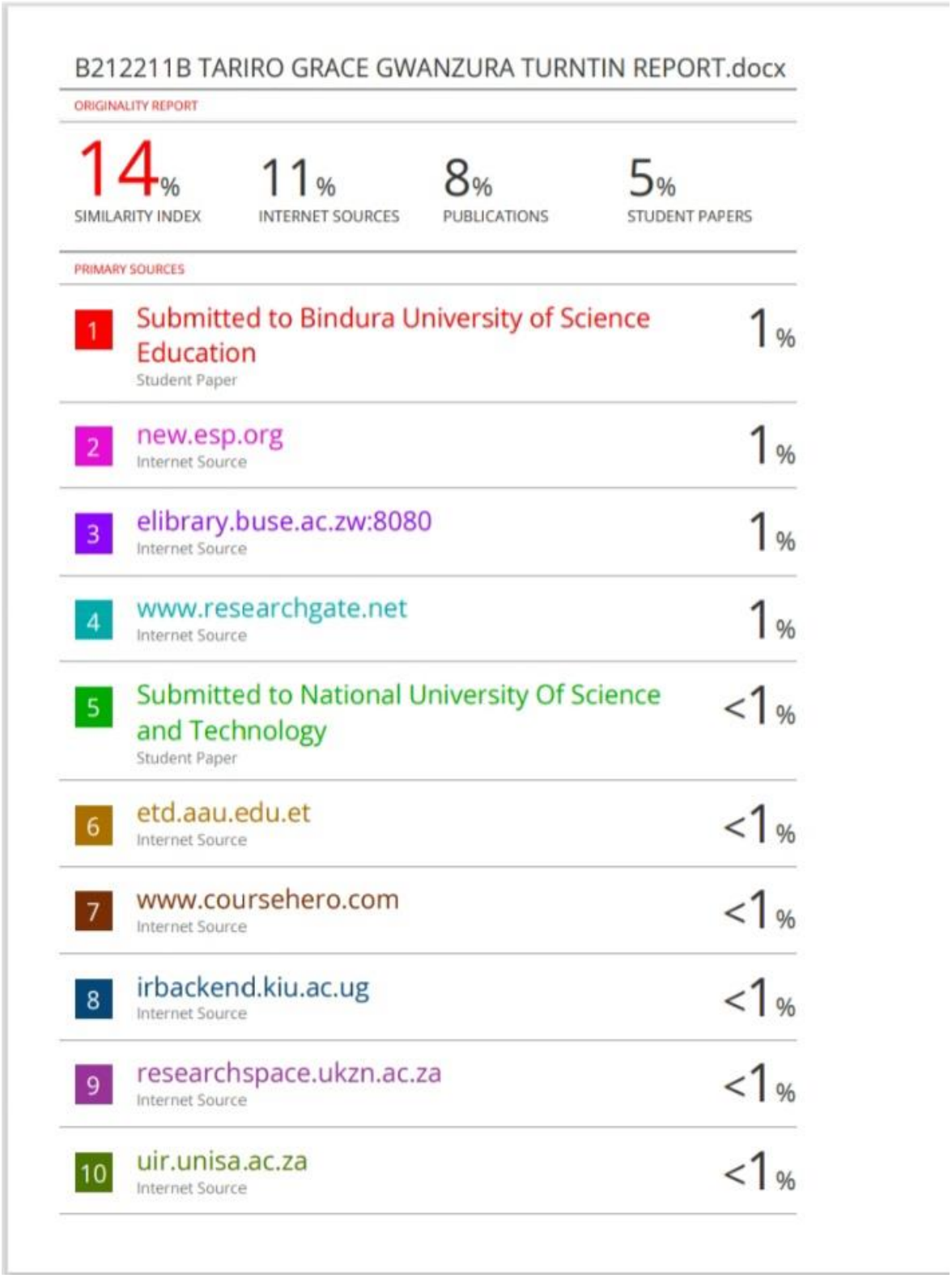
Tariro Grace Gwanzura registration number B212211B has been granted permission to carry out research in Makoni District on "Assessing Climate Change Impacts on the Safety and Wellbeing of Children in Ward 16, Mupoperi Village in Makoni District, Zimbabwe.

The permission is granted with the condition that the findings will also be shared with the relevant government department.

Puwai R T
For DDC
MAKONI

MINISTRY OF LOCAL GVT & PUBLIC WORKS
DDC's OFFICE
10/04/25
P. O. BOX 96
RUSAPE

APENDIX E



B212211B TARIRO GRACE GWANZURA TURNTIN REPORT.docx

ORIGINALITY REPORT

14%	11%	8%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Bindura University of Science Education Student Paper	1%
2	new.esp.org Internet Source	1%
3	elibrary.buse.ac.zw:8080 Internet Source	1%
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5	Submitted to National University Of Science and Technology Student Paper	<1%
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