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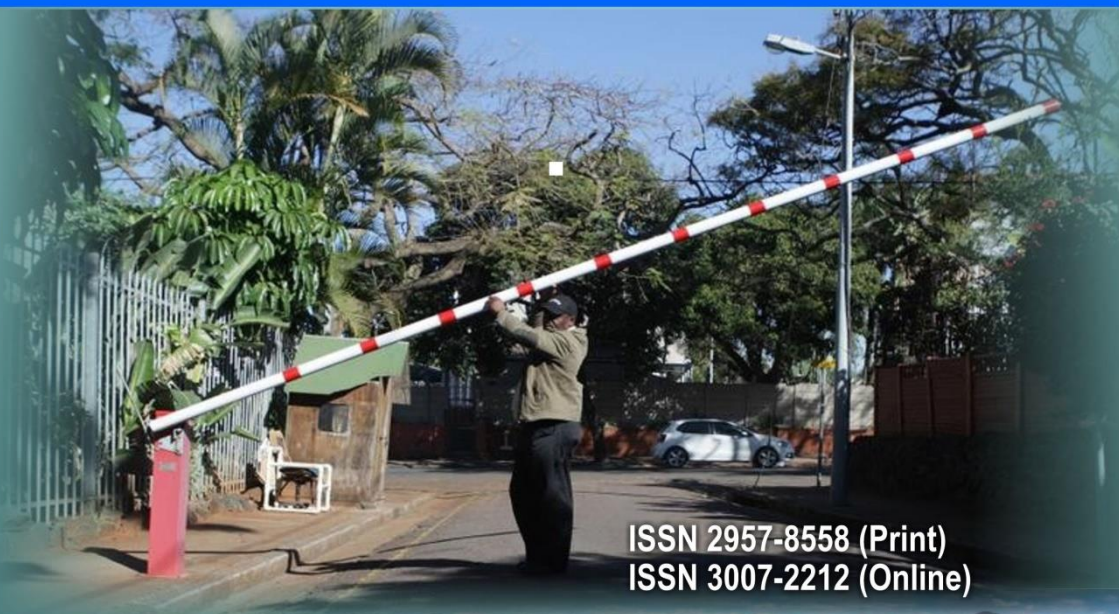
THE ZIMBABWE EZEKIEL GUTI UNIVERSITY JOURNAL
OF COMMUNITY ENGAGEMENT AND SOCIETAL TRANSFORMATION



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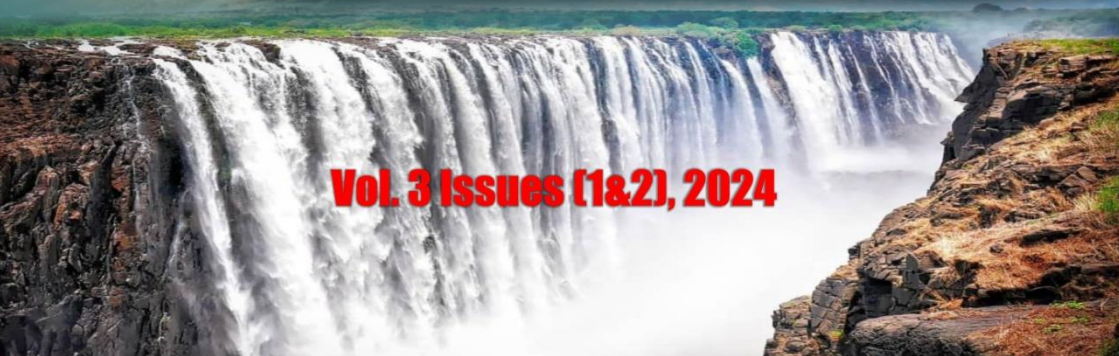

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About the Journal

JOURNAL PURPOSE

The purpose of the *Ngenani - Zimbabwe Ezekiel Guti University Journal of Community Engagement and Societal Transformation Review and Advancement,* is to provide a forum for community engagement and outreach.

CONTRIBUTION AND READERSHIP

Sociologists, demographers, psychologists, development experts, planners, social workers, social engineers and economists, among others whose focus is on community development.

JOURNAL SPECIFICATIONS

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SCOPE AND FOCUS

The journal is a forum for the discussion of ideas, scholarly opinions and case studies of community outreach and engagement. Communities are both defined in terms of people found in a given locale and defined cohorts, like the children, the youth, the elderly and those living with a disability. The strongest view is that getting to know each community or sub-community is a function of their deliberate participation in matters affecting them by the community itself. The journal is produced bi-annually.

Guidelines for Scholars for the Journal

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

Manuscript Submission: Articles submitted to the *Ngenani - Zimbabwe Ezekiel Guti University Journal of Community Engagement and Societal Transformation* are reviewed using the double-blind peer review system. The author's name(s) must not be included in the main text or running heads and footers.

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

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ENUMERATING THE IMPACTS OF CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION IN VULNERABLE COMMUNITIES AND THEIR RESILIENCE IN ZIMBABWE

MOREBLESSING MSUNDIRE[1] AND ROSELIN NCUBE-KATSANDE[2]

Abstract

This article critically discusses the adverse impact(s) of climate change and environmental degradation in vulnerable communities and their attendant resilience strategies in Zimbabwe. Communities that occupy peripheral or environmentally degraded areas frequently struggle daily to survive and are not capable to deal with any other stress factors. The research method utilised in this study was secondary data analysis to gather literature and analyse findings to answer the research topic. Results highlight that, climate change and environmental degradation are partly to blame for the vulnerable groups' persistent poverty and hunger as they depend heavily on subsistence economies and natural resources for their survival. This, in turn, has hindered their ability to build resilient communities as their stresses are interlinked. The study concludes that Zimbabwe's ability to reduce and adapt to climate change must be reinforced. Refining our understanding of how environmental vulnerability is connected to vulnerable communities and their resilience is novel and crucial in mapping strategies for developing and engendering resilience. It is important for governments to support communities to diversify livelihood and fall-back alternatives.

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Keywords: rural poor, marginalised societies, hazards, susceptibility, livelihoods, poverty.

INTRODUCTION

Societies who live in peripheral or environmentally degraded areas usually struggle on a daily basis to eke resilient livelihoods which are capable of dealing with any additional stress influences caused by climate change. Inadequate livelihood options, competition over limited resources, weak governance structures and lack of access to healthcare and other services can compromise a community's capacity to react to and recover from a hazard occurrence. This research sought to study the impacts of climate change and environmental degradation in vulnerable communities and their resilience in Zimbabwe. Combining existing and new evidence from across sectors and spheres, the research paper serves as a robust reference for policy makers, researchers and project and programming experts at all levels to appreciate interlinked issues. Recommendations will help forge appropriate mitigation and adaptation response mechanisms to help boost resilience in vulnerable societies across environment and climate change related contexts.

Humanitarian emergencies and exigencies on the African continent, such as severe droughts, demonstrate the vulnerability communities in developing economies to extreme physical stress. Weak institutional support adds to the vulnerability of these communities that are then affected by these shocks. Connolly-Boutin and Smit (2016) argue that the threats associated with climate change increase when combined with poverty, weak governance and poorly maintained infrastructure, that can have adverse effects on food security. Food insecurity is the consequence of the multifaceted connections of many socioeconomic and environmental stressors over a prolonged period of time and unanticipated shocks (Devereux, 2007; Tirivangasi, 2018). The impacts of climate change on livelihoods, food security and social security are

widespread and negative. Aspects of climate change that adversely impact vulnerable groups include prolonged and recurrent droughts; floods; heat waves; seasonal and rainfall pattern shifts; and ecosystem adjustments (Nyahunda and Tirivangasi, 2021). No longer can the potential for climate change to weaken rural development be overlooked. In sub-Saharan Africa, severe drought already hinders people's ability to cultivate crops and rear livestock (Connolly-Boutin and Smit, 2016). The consequences of climate change on agricultural output have a direct impact on vulnerable people through decreased revenue and employment and will have repercussions for their livelihood support systems and food security.

Zimbabwe's smallholder farmers rely heavily on rain-fed agriculture, although the country is vulnerable to climate change. Consequently, the country's ability to reduce and adapt to climate change must be strengthened with a view to nurturing resilience. Widespread hunger and poverty remain to be among the most life-threatening crises threatening humanity, but climate change is adding fuel to the fire. It is crucial to understand that climate change is causing a significant decrease in crop harvests and an increase in food prices, although agriculture is a major economic activity in rural areas (World Food Programme, 2016). Under such conditions, vulnerable groups that already spend most of their earnings on food are forced to sacrifice other belongings to gain access to food, healthcare and other amenities. Thereby deepening their poverty. This research recognises the following groups as the vulnerable sectors: women and children, rural flocks, people living with disabilities, the elderly and the indigenous groups. These will be analysed with regards to how impacts of climate change and environmental degradation have had effect on their resilience. The research in conclusion will offer recommendations that can be engaged to address the related impacts to build resilience in vulnerable societies.

The article adopted an literature review methodical approach with a view to comprehensively and concisely state the evaluation of objectives, defining a search strategy and the criteria used to build a sample of reliable and significant realistic articles. In line with the nature of the study, a multi-faceted approach was implemented to identify relevant literature. Secondary data analysis was conducted through an internet-based search for documents and a desktop review of printed and online literatures were used to permit analysis. The peer reviewed literature in the form of journal articles in English that were published between with the exclusion of grey literature including unpublished work, reports and books, was analysed. The keywords that were used during searches included, climate change, environmental degradation, vulnerable groups and resilience.

Analysis of articles was pursued to identify impacts of climate change and environmental degradation on vulnerable communities and their resilience's. Groups of vulnerable sectors within societies were identified and their relationship to the study aim was then analysed, outlining the impacts and offering recommendations to address these associated problems. Case studies were drawn from Zimbabwe. Only research studies showing how the vulnerable groups are impacted by climate change were included. A combination of the gathered articles that met a search criterion was synthesised with the patterns, themes and trends identified, followed by the thematic analysis. Thematic analysis (Clarke and Braun 2013) was preferred because it is a simple, rich, flexible and robust method to categorise problems, perceptions and recommendations together.

THE HYOGO FRAMEWORK FOR ACTION AND THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

The Hyogo Framework for Action (HFA) was adopted in January 2005 at the World Conference on Disaster Reduction that directs disaster

risk reduction activities internationally. The Hyogo Framework recognises that environmental degradation contributes to disaster risk and that disasters happen when hazards interrelate with, among other factors linked to environmental vulnerability. The framework encourages governments to pursue the extensive lessening of disaster losses, in lives and in the social, economic and environmental properties of communities and nations. As such, the Framework identifies both the role of environment as a trigger of disaster risk and the sensitivity of the environment to the forces of threats. Human societies cannot be detached from the environments that they form and that influence their growth and livelihoods. Combined they form an all-inclusive system with intrinsic levels of vulnerability and essential coping apparatuses. The less degraded the environmental element of this system, the lower its total vulnerability and the higher its coping ability.

In its inception, the 2030 Agenda for Sustainable Development was directed by the dedications and principles of the Charter of the United Nations, comprising full respect for universal law, grounded in the Universal Declaration of Human Rights. In Sustainable Development Goal 13, Member States devoted to embark on urgent action to battle climate change and its influences. Targets included, strengthening resilience and adaptive ability to climate-related threats and natural disasters in all nations. Incorporate climate change actions into national policies, approaches and planning. Progress education, awareness-raising and human and institutional capability on climate change alleviation, adaptation, effect reduction and early cautioning. Support tools for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, comprising concentrating on women, adolescence and indigenous and marginalised societies.

LITERATURE REVIEW

This section of the article critically reviews relevant literature within the existing corpus on climate change, pollution, poverty and the development of resilience among climate-adversely affected communities. The Intergovernmental Panel on Climate Change recent reports produced (2007, 2012, 2014) conclude not only that GHGs emissions are now beginning to change the global climate. Because of this process Africa will experience increased water stress, reduced harvests from rain-fed agriculture, increased food insecurity and mal-nourishment, rise in sea level and growth in arid and semi-arid land. Extreme weather events, particularly floods, droughts and tropical storms are expected to increase in occurrence and intensity across the region (IPCC, 2014). These forecasts are consistent with recent climatic patterns in Southern Africa, including Zimbabwe. The effects of this exposure to changes in climate are worsened by the high levels of sensitivity of the ecological and social systems in the region and the restricted capability of civil society, private sector and government sectors to respond properly to these developing threats. Continuous worldwide environmental degradation is being experienced, disturbing billions of people around the globe. Environmental degradation can affect populations in various forms, as it restrains the intertemporal supply of vital ecosystem services for human survival, including the provision of energy, food, water and biodiversity.

INTERACTION BETWEEN LAND DEGRADATION AND CLIMATE CHANGE

Environmental degradation actions contribute to climate change by increasing the mineralization and release of CO2, a main greenhouse gas into the atmosphere. Processes like expansion of cultivation land, ruminant stocks and manure disposal and nitrogen over-fertilisation joined with soil acidification lead to the release of GHGs to the atmosphere. Logging, clearing, woody encroachment and over grazing lead to reduced plant cover and reduced biomass stocks, causing warming effects and net carbon releases from soils and vegetation

stocks. Climate change speeds up land degradation through modifications in different climate variables such as temperature and rainfall. On the other hand, variation in rainfall intensity and other extreme weather events influence significant land degradation processes such as erosion (IPCC,2014).

The interaction and adverse linkage or nexus between climate change and environmental degradation also has consequences for poverty and livelihoods through its threat multiplier result. Estimations indicate that 1.5 billion people were reliant on degraded land to support their livelihoods in 2007 and more than 42% of the world's poor population lives in degraded areas. People living in marginalised agricultural areas face a poverty environment trap that can result in increased land degradation under climate change conditions. By 2050 predictions indicate, 50 to 700 million people are anticipated to have migrated due to loss of livelihood activities from climate associated environmental degradation (Organisation for Migration UNHCR, 2014). Availability of livelihood safety nets can also be reduced by climate-related land degradation resulting in migration.

Resilience is closely linked to vulnerability. Some scholars interpret resilience as ability to and vulnerability as inability to, thus making the two terms contradictory of each other (Birkmann, 2010). On the one hand, resilience building can increase capacities to prepare for looming threats thus reducing vulnerability to catastrophes. On the other hand, vulnerability reduction adds to resilience building through reducing exposure, decreasing sensitivity and reinforcing institutional capabilities. This is particularly essential in resources constrained rural areas.

Social, institutional and political aspects govern powers greatly influence vulnerability to disaster and climate risk (Shepherd *et al*., 2013). Certain groups amongst the poor are predominantly vulnerable

to disasters, these groups include children, the disabled, older people, indigenous groups, people living with albinism, migrants and women. Absence of or limited access to public services like health care, education, information, decision-making and justice causes their vulnerability. Their environmental context: their financial position, socioeconomic, cultural and gender status also effects vulnerability and capacity to build resilience. For all of these reasons, disasters and poverty have a co-dependent connection. Poverty makes people more vulnerable to the aggressive effects of disasters and disasters creates more poverty. Indisputably, natural disasters are a primary reason human are poor in developing nations (Narayan *et al*., 2009).

Climate change is destabilising already limited enjoyment of several human rights by people in affected areas in countries of origin, destination and transit. African countries are extremely troubled by climate change effects despite having contributed very little to global emissions and the groups most affected by this problem are often already those in vulnerable circumstances. Threats to the right to life and the enjoyment of life amenities stem from climate change-related reasons including extreme weather events and rising frequency of infectious diseases, sometimes coercing people to migrate in search of safety. Droughts, floods, soil degradation and other occurrences related to climate change are making it more challenging for households to enjoy the right to food and sustain livelihoods, particularly for those working in agriculture or associated areas, at times making migration of one or more family members a survival plan. These occurrences also form threats to the right to health both in places of origin and in-migrant camps and other places of transit or destination and they threaten the right to housing as homes are lost and living conditions eroded due to climate change-related life-threatening weather events (UNHCR, 2014).

THE ZIMBABWE CLIMATE CHANGE SETTING

Climate change is the leading danger haunting mankind today. Zimbabwe is susceptible to a range of changes in temperature and precipitation with extreme happenings such as droughts, heatwaves, heavy rains accompanied by flash floods, strong winds and hailstorms becoming common. Climate is the average state of atmospheric settings at a specific location, expressed through weather components such as air temperature, precipitation, wind and types of cloud. It is anticipated to change over time, either naturally, as fundamental parts of how global and regional climate systems function or in reaction to other influences triggered by human activity (Government of Zimbabwe, 2015). There is growing scientific evidence that present day climate change is being caused by human meddling with the functioning of the atmosphere (IPCC, 2007, 2014).

Zimbabwe is facing hotter days in general and fewer cold days than before because of climate change and changeability. The period since 1980 has been the warmest since Zimbabwe began recording its temperature and there is a general increasing drift in the national mean annual maximum temperature. Warming between 1901 and 2012 has been about 0.9 degrees Celsius for maximum temperature, with much of the warming occurring after 1980 (Unganai *et.al*. 2009). Nonetheless, the maximum temperatures have ranged between different localities, with temperatures being higher in the low veld (Beitbridge and Victoria Falls) and lower in the high veld (Chipinge) but normally showing an escalation at all elevations since 1980. Such differences impact the kinds of livelihoods that can be involved in the different areas. There was not much change in the national mean minimum temperatures, that floated around 14 degrees Celcius from 1980 to 2001, then there was safety and nutrition, delivery of water, sanitation and hygiene services and other dynamics. About 2.8 million people were estimated to be food insecure, thus disturbing human development (ZIMVAC, 2016).

There are distinguished impacts of extreme climate events with vulnerable groups that are less adaptive being most affected (Mabaso et al 2021). Over the last 10 years many cyclones, namely Cyclone Eline 2000, Japhet 2003, Dineo 2017, Tropical storm Chalane 2020, Eloise 2021 have affected Zimbabwe. Cyclones frequently enter Zimbabwe from the East and the provinces mostly affected are Manicaland, Midlands, Masvingo and Matabeleland South. From the year 2000 up to present, about 1000 people have lost their lives owing to cyclones. Road infrastructure and rivers are affected by landslides, rockslides and mudslides affecting sources of water. 1.17 million hectares of forests and 104,620 hectares of protected areas were affected by Cyclone Idai (Chatiza, 2019). Cyclones Dineo, Idai and Eline led to more than 115 345 households being affected, cyclone survivors faced post disaster posttraumatic disorders, loss of livelihoods, abandonment and social segregation (Chapungu, 2020).

ENVIRONMENTAL CHALLENGES IN ZIMBABWE

Land degradation, including soil erosion and land pollution, is a serious problem in Zimbabwe with adverse consequences for agricultural production, mostly for people living in poverty. It is caused by several factors such as inappropriate wetland utilisation, over utilisation of arable and grazing land, agriculture extension and human- wildlife conflict. The rate of deforestation in Zimbabwe is very high, presently hovering around 1.9% (compared to the southern African regular deforestation rate of 0.5%). Between 1990 and 2005, 21% of its forest cover was lost and the country has no primary forests left. The central causes of the deforestation are poverty related and include firewood gathering for purposes of fuel and timber extraction, land clearance for farming and energy for tobacco curing. Low household wages and high costs for other types of energy are motivating forces.

Groundwater is an important source of water for both rural and urban areas in Zimbabwe, but water accessibility is an increasing problem. Reduced water availability is caused by over-use due to population growth, urbanisation and industrialisation, resulting in increased competition between water using divisions. Weak water governance systems make the situation more complex. Zimbabwe is currently facing one of the worst droughts in a long time.

Pollution of surface and groundwater is a worry, exacerbated by water stress. Insufficient or non-existent treatment of municipal and industrial wastewater is the main cause of water pollution. This is execrated by increasing population growth, extensive urbanisation, increased industrial undertakings and high utilisation of cultivable land. Climate Change caused disruption in the lives and well-being of Zimbabweans constraining or even reversing the progress in social and human development that the country has accomplished so far. Despite some progress in human development throughout the world, there remain great challenges caused by climate change and lack of environmental sustainability, among other factors (UNDP, 2015). These create serious problems with far reaching social, economic, political and environmental penalties, mainly to vulnerable nations (Government of Zimbabwe, 2015). In Zimbabwe, climate change is delaying the country's development and pose a severe risk to food security and to the adaptive capacity of the Zimbabwean population, especially among vulnerable groups. Thus, climate change concerns need to be incorporated into the national development planning processes at all stages, including national, district and local, to ensure coordinated programming and undertakings.

FINDINGS

A case study of Gokwe District, Zimbabwe's biggest district, situated within agro ecological zone III, brings to light and sharp focus the foregoing. Gokwe is one of Zimbabwe's most major producers of

cotton, which is a primary cash crop for the country and for local farmers. Climate change impacts in Gokwe have had significant impacts on local and national economy. The study found that the bulk of farmers observe increases in temperature, decreases in rainfall and more recurrent drought events, that reveals trends in the statistical data over the past 30 years. All farmers highlighted that their cotton output were severely affected by the drought years of 1981-82 and 1991-92. In addition, declining cotton outputs also negatively impact social and human capital. This was demonstrated by occurrences of parents withdrawing their children from school due to lost income, migration of productive age groups to urban areas in search of other livelihoods and increased antisocial behaviour in the town centre.

Mozambique was experiencing a multi-year drought that cut up agricultural production when it was affected by two unprecedented storms in March and April 2019. Cyclones Idai and Kenneth displaced 640 000 and 45 000 people correspondingly. Together were among the world's largest disasters in 2019. Cyclone Kenneth is measured the strongest to have ever hit the region. Their effects stretched beyond Mozambique and generated serious destruction and displacement in Comoros, Madagascar, Malawi and Zimbabwe. Persistent heavy rains hindered efforts to help people return home. A year later, more than 100 000 people were still displaced and millions continued dependent on humanitarian aid.

Universal environmental and anthropogenic climate changes that result in environmental degradation have severely disrupted people's quality of life and its impacts have diverse bearings on the social groups as established by the IPCC. The well-being of the vulnerable communities (these include, people living with disabilities, women and children, the rural poor, elderly and indigenous people) has been extremely affected by the influences of climate change. This section discusses the analysis made highlighting the impacts of climate change

and environmental degradation on vulnerable communities and their resilience. Thematic analysis will be used; themes were used to refer the different vulnerable groups in answering the research objective.

Zimbabwe is presently one of the most affected nations in the world by the fluctuating climate conditions. It is highly exposed to ecological threats and extremely vulnerable to climate disturbances. Like many other African countries, Zimbabwe is greatly reliant on natural resources that makes it particularly vulnerable to extreme weather events and climate capriciousness. Climate sensitive sectors such as agriculture, livestock, forestry, tourism, mining and hydropower generation sustain the Zimbabwean economy. The climate in Zimbabwe is anticipated to become more intermittent. The country is projected to suffer from increasing temperatures, droughts, increasing rainfall inconsistency, floods and increasing occurrence of storms. These occurrences will severely impact the country's agricultural division due to its great climate susceptibility. Its great dependency on rain fed agriculture makes it extremely susceptible to droughts and rainfall erraticism. This is projected to have a great effect on the economy and society as agriculture employs 70% of the total population, contributes to roughly 10% of the gross domestic product and is a main industry in the battle against poverty and food insecurity.

Those in rural areas, especially women and children among the rural poor, are enduring the impacts of the changes and they constitute the most adversely affected demographic populations. By tradition, Zimbabwean women, helped by children, are accountable for the provision of food, water and cooking energy. They also offer the main labour for agricultural activities. The effects of climate change and environmental degradation mean more workload and more adversity for women and children as they walk extra to collect water and firewood and come across increasing difficulty in food production.

Clean water and fuel for cooking is scarce, affecting domestic hygiene and nutrition and destabilising the health of expectant and breastfeeding women and their children. Women and children have been exposed to emotional and physical abuse, that consequences could, unfortunately, be traced to their vulnerability to the adverse effects of climate change. Children are also more vulnerable to the effects of heat stress, disease and food shortages as they travel long distances to school, under unfavourable weather conditions. Furthermore, with environmental degradation, the terrain they travel on has been disrupted resulting in longer routes or unsafe alternative routes. Children and infants are also harshly affected by the adverse impacts of changes in the climate as these alterations pose risks to their education, safety, family safety, survival and diseases such as diarrhoea and dehydration.

Climate change impacts have put more girls at risk of early marriage as families struggle to deal with impacts and see this as a way to ease the financial load in the household and secure their future. Nonetheless, child marriage is a defilement of children's rights with lifetime effects, including inhibiting them from receiving an education, affecting health and exposing them to greater risk of sexual violence and domestic abuse.

Gender-based violence has affected the security and well-being of communities and individuals, violating human rights, complicating development goals and contributing to series of vulnerability at all stages. Entrenched in discriminatory gender norms and laws and masked in impunity, GBV transpires in all societies around Zimbabwe as a means of control, suppression and manipulation that further fortifies gender inequality. National and customary laws, communal gender norms and traditional gender roles often dictate who can access and control natural resources that frequently results in the marginalisation of women compared to men. Threats and pressures on

the environment and its resources have increased gender inequality and power inequalities in societies and families coping with resource scarceness. Societal stress, gender-based assaults and provocation are employed to bar women from exercising their rights over and use of resources, increasing the loss of traditional knowledge, biodiversity and ecosystem services and resulting in new, further damaging practices of violent control and mistreatment.

Women have been experiencing increased risks, exposure and susceptibility to violent occurrences, sexual assault, rape and provocation when conducting water collection. These risks are amplified when water resources are far or in distant areas. Water access reduced due to environmental degradation and escalating prices amplifying prevailing patterns that contribute to GBV, such as household and community strain and tensions that can upsurge domestic violence. Traditional gender customs around water collection buttress and spread GBV when those roles are challenged. In households where it is typical for wives or children to collect the water, men who partake in water collection face gender-based provocation from community members. This has negatively impacted household, as humiliation results in increased domestic violence.

Approximately 15% of the world's population, or nearly 1 billion people, live with disabilities. The obstacles that people living with disabilities face take many forms, including physical, legislative, social, representational and economic multifaceted forms of discrimination. They live in poverty, are often poorly educated and suffer from precarious health. They have less employment chances with services insufficiently and inadequately sponsored. People living with disabilities have been left behind during evacuation in disasters, with limited access to emergency accommodations and transportation methods. It is projected that climate change will cause increasing adversity for persons with quality of life likely to depreciate. The

capacity to adjust, livelihood opportunities and resilience are all expected to degenerate in a changing environment. Climate change is already causing an increase in the occurrence and prevalence of many disabling deficiencies. In many community's persons with disabilities and their families already face food shortages on a daily basis due to their poverty.

Indigenous peoples constitute nearly 4.5 % of the worldwide population, but account for about 10% of the world's poor. While they are all different communities and have diverse vulnerabilities, one commonality is that their livelihoods and cultures are greatly reliant on natural systems and natural resources. Their capacity to forecast and infer natural phenomena, including weather conditions, is vital for their existence and well-being and has also been contributory in the development of their cultural practices, social structures, dependence and authority. Their identities and culture are inseparably linked to the lands on that they live and the natural resources on that they depend. The risk of displacement by a disaster therefore represents a threat to both. This has resulted in the erosion of indigenous knowledge systems in most societies in Zimbabwe, affecting the traditional coping mechanisms that can assist in reducing environmental degradation while fostering resilience building.

Poor and marginalised people in Zimbabwe are more harshly affected by natural threats and climate extremes for numerous reasons. First, they frequently face more exposure to hazards by living in marginal, drought-prone or unsafe areas. Their vulnerability is greater as they live in substandard housing and have unclear land ownership rights that offer no incentives for investments in risk reduction. Additionally, their livelihoods are more predisposed to the effects of hazards and climate change, with the rural poor being greatly dependent on agriculture or natural resources for survival.

Secondly, when hazardous events occur, the poor and marginalised families are less able to absorb and recover from the impacts emanating from climate change and land degradation. With little savings and inadequate or no access to formal credit, the poor depend on a variety of sub-optimal surviving mechanisms after a disaster. For example, some sell productive assets such as livestock and pull children out of school to save on school fees, all of which leaves them sealed into a cycle of poverty. For households living just below the poverty line, disasters are slowly them into a state of poverty and greater vulnerability. Many post-disaster aid and recovery initiatives do not guarantee that particular vulnerable groups are properly recognised and reached, in spite of substantial evidence of the harmful effects of failing to do so.

Although the elderly is a very dissimilar group, many are mostly vulnerable to catastrophes for a wide range of reasons that vary from certain physical, economic and social settings to the type and harshness of the hazard event and ability of the affected country to manage its effects. Mental, visual, or hearing deficiencies limit understanding and suitable reaction of the elderly. Likewise, restricted movement makes it more challenging for them to vacate and safeguard themselves. Chronic health conditions deteriorate after a disaster. Influences such as the lack of food and water, extreme heat or cold and disruptions in medication routines also aggravate underlying illnesses and increase the risk of illness and death. Poverty and social segregation often make it difficult for the elderly to correctly prepare for disasters and to vacate, relocate and recover after the disaster.

Refugees, internally displaced persons and migrant workers are mostly vulnerable to the effects of disaster. Whether they have crossed an international border or have been moved within their own countries, these populaces find themselves dispossessed of their livelihoods and the simplest services. Fearful of arrest or forced

deportation, they become reluctant to search for aid. They also face complications replacing official documents to re-establish their legal identities. Zimbabwe as a country hosting some of these populations has inadequate means to extend them assistance due to the prevailing social, political and economic challenges.

The welfare and health of Persons with Albinism (PWA) has been excessively affected by changes in temperatures because of climatic changes and variations. Discrimination against and the marginalisation of PWA still continues even though PWA are being protected by the Convention on the Rights of Persons with Disabilities. However, although these legal provisions exist, they are still far away to be realised practically The distressing effects of climate change and its deviations have also impacted people living with albinism. In Zimbabwe, mainstream hospitals and clinics do not understand fully the condition. Frequently people with albinism do not get suitable medical care due to the fact that the hospitals and clinics are not user-friendly. How can one attend a person they are afraid of because they think by just getting into close interaction with them, they too will give birth to a child with albinism? The myths themselves hinders services. Many persons living with albinism cannot afford suitable amenities such as sunscreen to protect themselves from the harsh escalating temperatures, their eyesight is also affected by increase in temperature. Albinos are exposed to the risk of direct sunlight (damaging effects of ultraviolet light) because of their deficiency of melanocytes in the skin. Elongated exposure to sunlight increases their risk of developing skin ailments such as skin cancer. Zimbabwe has a high rate of albinism of 1 in 1 000 people. As such, the following are the contributing factors for resilience building related vulnerable groups in the climate change and environmental degradation discourse.

Farmers without a diverse source of are likely to stand a better chance to adapt to the impacts of climate change than those who are more

diversified. Economic resources can be attained through a remittances and access to credit services that give the smallholder farmers the capability to be reactive in the wake of climate change and its associated effects. It is imperative to argue that, economic resources can be expanded through diversification of livelihood activities linked to access to opportunities. Hence, farmers with economic security can be easily protected from the hazardous effects of climate change. This is because they can afford to purchase climate sensitive farming inputs including hybrid seeds, pesticides and stock feed for livestock. Economic security is the assurance for food security even under conditions where agricultural yields are low due to climate change. On the same note, farmers with economic security have the capacity to protect their crops and other properties in the wake of climate change brought disasters such as floods, cyclones and drought.

Training as a sign for effective adaptation assumes that farmers with vast farming experience and access to additional services that improves training, knowledge and expertise about climate change have a greater chance of adapting to climate change effects than those that lack farming skill and training. Knowledgeable farmers have custom indigenous adaptation practices and they have the aptitude to identify and respond to climatic variations. In the ongoing, there is a positive connection between literacy levels and capacity to adapt to climate change. This refers to farmers with high literacy levels having the capacity to adapt than those with lower or without literacy levels. What should be emphasized is that knowledge that permits success in the climate change landscape is a produce of education either formal or informal. The research critically argues that education, training and public awareness on climate change is important for persuading the society to cooperatively partake in climate change management that is adaptation. In this regard, the disposal of knowledge guides decision-making peculiar for adaption.

One of the various resources accessible to individuals in each community regardless of presenting conditions is social capital. This is a network of social networks formed through relations with other members of the public that assists as a hallmark of adaptation when societies share resources, information and joint customs to build resilience against climate change. Adaptation to climate change leans on a social constituent as individuals interact with other network affiliates to share resources, advance information, construct new institutions and produce shared customs, to offer resilience to climate change. As such, social capital assists as a public good in supporting entire communities through precarious events such as climate change. In the history of climate change approaches, social capital serves as an essential vehicle used to obtain agricultural resources, shared problem-solving methods, information distribution, knowledge generation, sharing of practices and solutions for disaster management. This implies that people with social capital links can certainly adapt to climate change distresses. Notably, social capital creates social protection.

Societies with reliant justice practices have ambient environments for effective adaptation to the climate change influences by all members. In as much as this is an unlikely position in most rural communities in Africa, adaptation is also a creation of equity where there is fairness and equality in sharing of climate change problems and benefits, equal sharing to resources and opportunities including climate change information, early warning alertness concerning catastrophes across gender paradigms. Topics of equity as a pointer for adaptive ability means men and women are equally involved in the formation and implementation of climate change interventions at all stages. This also voices to the inclusion of other vulnerable groups in communities that is the elderly and people with disabilities.

The availability and accessibility of technologies that improves the farmers' knowledge about climate change crop variations, soil moisture and fertility preservation methods is a remedy for climate change adaptation in societies where they are existent unlike in those without. Relevant technologies in the climate change dialogue are techno-science tools targeted at helping people in adjusting to changes for, early warning information systems, drought resistant crops, local weather forecasting, example irrigation systems and use of remote sensing.

For positive adaptation to take place, there is need for infrastructural and technological support structures. The accessibility of the same infrastructures plays an essential part in providing early climatic cautionary information and weather predicting. Essentially, they form part of pertinent webs that are important facets in decreasing climate change effects and foster the ability to react to natural disasters related with climate change that manifest through droughts and floods. Vital infrastructures that can expedite effective adaptation to climate change include; irrigation facilities, water catchments, boreholes, schools, quality roads, health care facilities and transport. Regardless of all these essentials missing or being inadequate in rural communities, in circumstances where they are present, they nurture successful adaptation in the face of climate change.

The availability of institutions that support or boost adaptation is the guarantee for adaptive capacity. Institutions play a prime role in the evaluation of adaptive capacity and resilience building. These institutions include; public and private institutions that is the government and other stakeholders that support adaptation to climate change through integration of their services. In the light of this, united institutional engagements from local to national levels may provide vital backing to the farmers to strategize and apply contingent adaptation activities with the aim of strengthening their resilience to

the adverse effects of climate change. In the same wavelength, strong institutions provide aids for agricultural inputs to rural farmers and disaster aid support in the face of climatic induced distresses. Countries with modern social, private and public establishments have a high adaptive capacity level than those with no or low efficient social institutions.

CONCLUSION AND RECOMMENDATIONS

Climate change, environmental degradation and natural resource shortage has wrought major threats to ecosystems and livelihoods, resulting in biodiversity loss, food insecurity, poverty, displacement, violence and loss of traditional and cultural knowledge. Resultant tension and competition over threatened resources in societies and households increases inequitable and manipulative gender-based disparities, generating conditions for worsened gender disparities. Such conditions have also affected other vulnerable populations and their ability to recover and remain sustained under the harsh climatic and environmental conditions has become daily challenge. Disaster risk reduction initiatives expand the growing acknowledgement that building community resilience is the fundamental approach to reducing the effect and severity of disasters. Efforts to build community resilience can be complex but should be community driven, with clear objectives and priorities for what an individual community considers crucial to become more resilient.

Policy improvement and interventions at all stages need to address the specific conditions of persons with disabilities in relation to climate change, together with those of their families. Societies normally lack consciousness of the importance of reporting early to the hospital for analysis and management of albinism related cancer. With climate change, the health risk exposure among albinos is likely to grow. Early introduction of precautionary procedures and early presentation, management and follow up, should be encouraged in the albino

populace to secure better results. There is a huge impetus to incorporate GBV concerns within national environmental mechanisms, processes and reporting instruments. Ensure ground policymaking in cross-sectorial gender investigates that look at GBV-environment relations. In addition, apportion resources to build capacities across agencies and improve answerability; campaign for parliamentary committees to apportion adequate domestic resources to eliminate GBV. Supporting societies to expand livelihood and fall-back alternatives, such as turning to livelihoods that are less sensitive to climate associated or other types of risk. Supporting community motivated methods that enable communities to drive a climate risk reduction plan in support of their development objectives.

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