

Housing Provision and Land Management in Mutare City: The Case of the Weirmouth Farm

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Abstract

The study assesses urban resilience in Zimbabwe through the lens of housing provision and land management. Weirmouth Farm in the City of Mutare is used as a case study to situate the urban resilience in the perspective of housing provision and land management. We argue that urban resilience in Mutare is compromised by the mountainous terrain of the region, which restricts urban growth and expansion in light of the rapid urbanisation that the city is currently experiencing. Adopting a mixed-method research design that inclines more towards a qualitative approach, data has been collected through document review that was validated with key informant interviews and household survey. Emerging from the study is that an increase in population has resulted in the urban sprawl. Furthermore, the geological terrain has hindered service provision. The housing model mainly targets low-income earners affecting the quality of houses in the area. Therefore, the study concluded that financial constraints and geological terrain are the major impediments to sustainable smart growth of Mutare City. With population increase and subsequent housing demand coupled with limited land for expansion. The study recommends the need for Public-Private Partnerships.

Keywords: urbanisation, resilience, spatial planning, sprawl, sustainability, management

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INTRODUCTION

It is estimated that by 2030, the urban population will reach five billion (60%) of the world's population (United Nations Population and Housing Division, 2010). Over the last decades, the rate of urban growth has been occurring at unprecedented rates at faster rates in the developing countries than in the developed countries. The vulnerability of cities in the developing countries to socio-spatial, economic and political changes related to rapid urbanisation impacts negatively on the urban development process. For example, consequences of this rapid rate of urbanisation on cities in the developing countries is associated with a number of urban challenges which include citizens' access to basic services, urban poverty, food insecurity, and urban insecurity. The existence and persistence of such challenges in the cities leave many questions concerning urban resilience. The concept of resilience is increasingly being placed at the centre of urban management narratives as stated in the Sustainable Development Goal eleven through which world leaders committed to creating sustainable, safe, resilient and inclusive communities by 2030 (Parnell, 2016). Furthermore, various scholars have shown the significance of resilience which has to be factored in as cities and towns grow (Jones, 2007).

Resilience is a contested and normative concept (Sharifi and Yamagata, 2016). Existing definitions are inconsistent and underdeveloped (Meerow *et al.* 2016). This can be explained by the multi-disciplinary nature of resilience which has resulted in different interpretations according to needs and priorities. In general terms, urban resilience explains the ability of cities and towns to sustain continuity amid the stresses and shocks that it may go through. Revell (2010) defines resilience as the adaptive capacity of a system to respond to unexpected shocks and unforeseen changes. In their definition, Meerow, Newell and Stults (2016: 39) state that "urban resilience is the ability of an urban system and all its constituent's socio-ecological and socio-technical networks across temporal and spatial scales to maintain or rapidly return desired functions in the face of a disturbance, to adapt to change and to quickly transform systems that limit current or future adaptive capacity". The aforementioned challenges confronting cities symbolise the disturbance to the urban system, which then calls for the understanding and exploration of the level of resilience of the urban system. In this setting, urban resilience is the ability of cities to manage and adapt to change, including their vulnerabilities. Central to definitions of urban resilience are ideas of robustness, mitigation, and adjustment at all levels (This includes national,

city and local level formal governance, to how residents respond to their local circumstances at hand). Flexibility and responsiveness in how cities and their residents adapt and respond to change, both positive and negative, are central to understanding notions of urban resilience and sustainability (Sudmeier-Rieux, 2014). As the urban system is confronted with a plethora of stresses which disrupt the ideal or envisaged urban set-up; urban resilience thus becomes of utmost importance as it helps cities to bounce back after going through rough times.

There are three major approaches to resilience thinking. These are engineering, ecological and social-ecological approach (UN-Habitat, 2018). From the engineering perspective, resilience is measured in terms of system's ability to restore functionality (Masnavi *et al.* 2018). A resilient system can quickly return to the previous state, while a less resilient system may take more time to recover or may fail to do so. This perspective emphasises persistence ability to remain stable or to resist disturbance and maintain the status quo (Meerow *et al.* 2016). The ecological approach is measured with the ability to absorb changes and still persist. This approach defines resilience as magnitude of disruption a system can tolerate before failing completely or crossing a critical threshold and changing its structure into a new equilibrium or steady state. The approach values both persistent and adaptability (UN-Habitat, 2018), or emphasis is on transition incremental adaptation (Meerow *et al.* 2016). Whilst the social-ecological approach is based on the conceptualisation of a system as a dynamic socio-ecological entity that continuously undergoes transformation the system may not necessarily return to an equilibrium state after shock (Sharifi and Yamagata, 2016). This approach is associated with the concepts of renewal, rehabilitation and self-reorganization (Masnavi *et al.* 2018). Emphasis is on transformability, the capacity to create a fundamentally new system when conditions make the existing system untenable (Walker *et al.* 2004). A common aspect of all these approaches is the ability to withstand, resist and respond positively to pressure or change.

Albeit the growing attention on urban resilience, it remains unclear as to the best approaches to integrate urban resilience in the development of cities and towns. The pursuit to understand urban resilience is also synonymous with Zimbabwe since the country is a signatory to the SDGs, New Urban Agenda as well as national urban agenda set for 2030, which all strive to promote urban resilience (Government of Zimbabwe, 2015, 2017; Mbiba 2017). Ironically, little research has been undertaken about urban resilience

in the context of human settlements planning, with most studies focusing on climate change resilience (Chirisa *et al.* 2016). Therefore, this study examines the efficacy and resilience of housing provision in Mutare where informal settlements are mushrooming in some parts of the city, notably in Chikanga (Mabaso *et al.* 2015). These occurrences have been attributed to an imbalance between population and housing provision attributed to the shortage of developable land (Chitekwe-Biti 2009). The existing status quo calls for an investigation of the urban resilience in the country in the face of the rapid urbanisation. Three main research questions guide this study: What are the land management provisions in Weirmouth Farm? How does housing provision and land-use management process facilitate or stifle urban resilience? Which are the best mechanisms of ensuring sustainable housing resilience in Mutare City?

Mutare City has a housing backlog of 30,000 (Mutare City Council (MCC), 2018). The mountainous nature of the town hinders housing provision. The study is situated in Weirmouth farm, which is zoned for agriculture. However, some of the agricultural plots have formally changed use to medium density residential. Urban expansion is a major cause of land-use changes (Singh and Kumar, 2012). Physical terrain such as rugged terrain, wetlands, mineral lands and water bodies often affect the growth of many cities in the world thus igniting horizontal urban expansion (Harvey and Clark 2005). Globally, the general urban expansion is considered as a modern way of life, which manifests economic growth and development. Minwuyelele (2004) noted that it is horizontal urban expansion that has engulfed more land, turning it into urban areas through the establishment of more industries and warehouses. As a part of this transformation, during the 20th century, there was a massive conversion of land causing changes in the land-use pattern. The land, which was equally utilised for primary purposes, was channelized for residential and commercial purposes (Berry, 2003).

India has witnessed rapid and uncontrolled horizontal urban expansion due to progress in industries, trade and population increase (Soluchana, 2005). The introduction of services and opportunities in cities fuels this growth. When the population increases due to migration, in the outer part of the city, horizontal urban expansion takes its toll on the natural resources leaving some terrains that are difficult to develop. Land development has been out of control and the construction on land has kept expanding blindly, especially in the marginal areas of these cities. The history of how African cities grew is very different from one of the developed world. Horizontal urban expansion

is common in African cities due to some rugged physical terrains, which include large rocks and mountains. In trying to design sustainable cities, planners avoid such features since they require a lot of money and sophisticated machinery to develop hence horizontal urban expansion acts as a way of reducing construction costs. The paper seeks to assess urban resilience in Zimbabwe through the lens of housing provision and land management using the case of Weirmouth housing development in Mutare.

DESCRIPTION OF THE STUDY AREA

Mutare, the third-largest city in Zimbabwe is also the capital of Manicaland Province. Located in the foothills of the Eastern highlands, the city lies in close proximity to the Mozambique border, which is approximately 10 km away (see Figure 1). The land available for urban expansion is rarely gently undulating hindering, urban growth and expansion. Specifically, Mutare is located 263 km south east of Harare and 290 km west of the Mozambique port of Beira, a situation that has earned the city the name “Gateway to the Eastern Highlands”. The City of Mutare like many other African countries is faced with the challenge of high urbanisation. Despite the scarcity for development, city leaders seem to be proffering a number of solutions to provide sustainable housing to its residents.

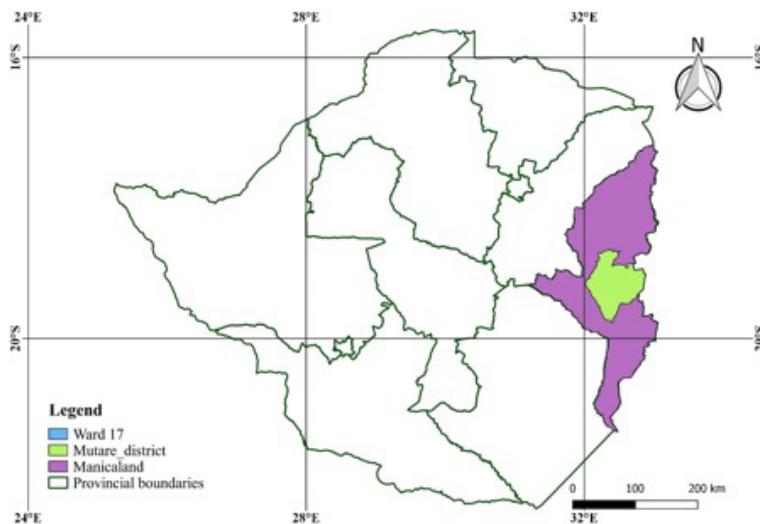


Figure 1. Location of the study area.

The study area is located in Mutare district and specifically ward 17. A few miles to the south, hidden from view from the rest of the city by a series of hills, are the low-density areas of Weirmouth Plots and Fern valley. (Mutare City Master Plan, 1988). In these areas, residential lots exceed an acre and market gardening is an economic activity. Apart from that, Mutare town lies north of the Bvumba Mountains and south of the Imbeza Valley.

LITERATURE REVIEW

Urban resilience in cities has been used in a number of different contexts ranging from climate change to sustainability and to the role of resilience in reducing the vulnerability of urban areas from natural disasters (Lewis and Mioch, 2005; Chirisa *et al.* 2015). The concept originates from the need to develop cities that have the ability to withstand various shocks. This is so because by their nature, cities are complex systems in which a number of processes unfold and at times may have negative impact on their functioning. Therefore, the concept of resilience can aid in planning by emphasising uncertainty, nonlinearity, adaptability and consideration of cross-scale linkages. In this regard, cities are nested in uncertainty in that socio-economic and political processes that take place are largely unpredictable and when certain events occur, their impacts may be devastating. For example, the social movements that characterised the Arab uprising in North Africa as well as the outbreak of endemic disease as Ebola and Cholera in Sub-Saharan and North Africa were sporadic. Not only does resilience consider these socio-economic dimensions, but rather, it also requires accepting the inevitability of ecological disturbances, including wildland fires (Cascade Forest Conservancy, 2017). The concept makes up a component of ecological integrity, a central element of the U.S. Forest Service's land management planning regulations promulgated in 2012. Accordingly, many planning units working on revising their land management plans are using the concept.

Despite the growing prominence of resilience in scientific research and in policy studies, many scientists and managers find that the concept means different things in different contexts (Bone *et al.* 2016). Ecological restoration management activities are often seen as a means for developing resilient landscapes (Timpane-Padgham, Beechie and Klinger, 2017). While resilience plays a central role in adaptation planning, it is often used in conjunction with other approaches. This is evident from the focus on environmental resilience, social resilience, political resilience, and climate change resilience, which is very prominent in resilience narratives (Chirisa *et al.* 2016). However,

albeit the increasing attention to scholarship on resilience, the concept has remained elusive. This is especially true in the context of land-use planning. The lack of indicators for measuring and gauging what resilience is or what has to be made resilient and from what remains complicated in the Global South, especially countries like Zimbabwe that are characterised by a plethora of urban problems. Overall, the resilience approach to land management emphasises uncertainty, nonlinearity, adaptability and consideration of cross-scale linkages. This perspective also considers the feedback loops that link human and natural elements of these systems (Walker and Salt, 2006). There is an inherent linkage between disasters and housing, though such correlation is more amplified in developing countries where housing is considered amongst the most valuable assets for people (Chang *et al.* 2010). Global paradigms in various disasters and environmental conditions have reflected the importance of sustainable land management. This has resulted in the survival of people and low damage intensity during past disaster events (Boen, 2001).

Rapid horizontal urban expansion in developing countries is usually associated with unplanned development in the periphery that requires high cost of infrastructure (Balchin, 2000). The demand for land in urban areas often compels individuals and groups to reside in the periphery where the pressure for land is less. This is mainly a result of the lack of basic services making the areas less attractive for habitation. Additionally, Balchin (2000) explained that even in planned activity the development of infrastructure does not usually match the large tract of land that develops in a low-density pattern. It is therefore important to note that horizontal urban expansion leads to social, environmental and economic impacts to urban areas and its surrounding communities and these effects can be either positive or negative. It is critical to consider now how urban expansion emerges as a shock to the urban system. Is it only to do with infrastructure needs, the implications of sprawl, and the environmental impacts of such developments or else the governance systems?

Since the reasons for urban expansion are similar to the reasons for urban growth, they are difficult to differentiate (Bhatta, 2010: 10). For instance, in Europe, the growth of cities was related to increasing production whilst in most developing nations it is related to population increase. Horizontal expansion of cities is a new phenomenon and its reason cannot only be attributed to population growth alone (EEA, 2006: 6). Therefore, the determination of horizontal expansion and taking measures against it is quite

important for sustainable urban growth. In many studies, the most important reason for horizontal expansion is indicated as the increase of demand for dwelling in low-density areas. Because of excessive demand for dwelling in city centres, there is an increase in building houses at city boundaries (Chin, 2002; Slaev and Nikiforov, 2013: 23).

During the 16th century, a large number of human populations in Africa lived a rural lifestyle. Since the 20th century, this trend started to change resulting in human populations migrating from rural to urban areas. Western literature has alluded to it as economic reasons (Berry, 2003). Horizontal urban expansion of most urban centres such as Hawassa in Addis Ababa, Ethiopia is largely affected by unsuitable environmental factors such as rugged terrain, wetlands, mineral lands and water bodies. These inhibit smart growth and often create leapfrog development sprawl (Harvey and Clark 2005).

In Zimbabwe, the history of urban development can be traced back to the colonial era. During colonisation, human settlements were scattered and sparsely populated, rural settlements with no cities and towns except for the deserted pre-colonial city-states of Great Zimbabwe and Dhlodhlo amongst others (Wekwete, 1992). According to Wekwete (1992) and Zinyama (1993) urban development was because of colonisation as the colonialists set some administrative structures and centres. They developed supportive infrastructures such as urban centres, communication linkages in the form of railway lines, road and telegram lines. The new administration also reorganised spatial land-use by expropriating prime land from the indigenous people. Mutare City is characterised by high-rise mountains. Tracing back to the history of the city during colonisation, these mountains acted as natural barriers that could protect the settlers against enemies (DPP, 1991) because of the rugged terrain (Munzwa and Jonga, 2010). However, the rugged nature of the landscape now hinders sustainable growth and expansion.

METHODOLOGY

The study is based on a mixed method research design where both quantitative and qualitative approaches were adopted. The data collected included a desk review of documents, services statistics, and housing scheme records. Three key informant interviews were purposively selected and conducted on officials from the Department of Physical Planning, Mutare City Council Planning and Engineering Department and a National Social Security Authority (NSSA) official. Field observations were purposively conducted on all the five plots that have been subdivided for housing development out of the

two hundred and sixty plots in Weirmouth namely Plot 7 which has 30 housing units, plot 31 with 96 housing units, plot 32 which is selling 75 stands and Chimwasa plot containing 152 NSSA four roomed houses and the proposed phase 2 by home-link on the same plot. Out of a population of 1035, the study randomly selected a sample of 280 respondents, through the use of random number tables. The sample size calculator (<https://www.surveymonkey.com/mp/sample-size-calculator/>) was used to calculate the required sample size. The calculations were based on the assumption that the population from which the respondents were drawn was normally distributed. The confidence interval for the sample was set at 95% and the margin of error was 5%. Thus, a survey design was employed in the study using a Likert-type questionnaire to collect quantitative data on housing resilience in the area. A survey is a sociological investigation method that use question based or statistical methods to collect information about how people think and act (Mertens, 2003). Analysis in terms of the composition, materials, technology, relevance, and sustainability was performed after collection of data from the field.

RESULTS

EVOLUTION OF WEIRMOUTH

Weirmouth has been zoned for medium density residential development under the new master plan. Therefore, those with plots and intent to subdivide them are allowed to do so, if they create medium density residential developments. The area is sparsely populated given that it is a residential-agricultural zone. The minimum size of the existing plots is approximately 7 hectares. Out of 296 plots currently, only 6 have been subdivided for residential stands. The subdivisions being created have stands averaging 350sqm. The houses conform to urban building standards. Plot 7 measuring 40 hectares has been subdivided into 30 stands most of which have been developed. A pre-school (Little Angels has been constructed on plot 8. Other service centres in the area include Muganiwa shop, bottle store and a private school Bridge Academy, which is a secondary school. There is only one primary school Mutare Prison Primary. The City of Mutare is the local planning authority responsible for development control whilst private developers provide services such as water and road network. Weirmouth is a planned settlement with a Local Development Plan. The plots in Weirmouth are privately owned. Private property developers who are purchasing the plots from landowners for development include National Social Security

Authority through the NBS Bank which bought Chimwasa plot. Since the area is already cleared for farming activities, there is not much deforestation.

Moreover, all building material such as pit and river sand are imported from outside the area further reducing the prospects of land degradation. In addition, to ensure environmental management, the subdivision and new development taking place in the area are being assessed for environmental impacts in accordance with the Environmental Management Agency (EMA) requirements. Adjacent to Weirmouth plots is a medium density location developed by Mushamukadzi Housing Cooperative. The change of use from agriculture to housing in Weirmouth plots has affected Mutare's tenure system given the mountainous nature of the town. According to Eurguden (2001), policies and laws must take into account the specific characteristics, needs, and challenges of mountainous areas, while also considering the broader political context, including downstream interests. Key aspects to be addressed are the improvement of infrastructure and the enhancement of public services. In Mutare, in order to meet such objectives, the central government through the Department of Physical Planning and the local authority must provide adequate financial instruments and resources to support vertical construction to lessen the outward growth of the city.

HOUSING RESILIENCE

Housing resilience dynamics emanate from changes of functionality and housing adaptation to the surrounding mountainous area. Since Weirmouth was originally zoned for residential-agricultural smallholding use and now has been rezoned for medium density residential use, some of the areas are swampy and low lying hence prone to flooding. However, despite the area being sandwiched by two mountain ranges, it is relatively flat and very suitable for residential development. The flat terrain explains why it was originally zoned for farming. The area is accessible and is well connected to other parts of the city. The primary distributor road from the southern side is Feruka Road which leads to Feruka Oil Depot. It can also be accessed from the city centre by another primary distributor, Magamba Road on the northern side which is partly tarred. There is also a network of secondary distributors and access road within the plots. The major constraint is the long-distance of over 10 km from the Central Business District (CBD) hindering walkability. The area has a network of electricity lines. However, due to financial constraints, most of the housing units have not yet been connected to the electricity grid. Other infrastructural provisions include

municipal water. Some plot owners have boreholes to support their farming activities. Most of the plots have onsite sewer services apart from a sewer line passing from Mutare Prison Farm.

The greater part of the area in question is still under development. Currently, the roads are not yet surfaced and water pipes are being laid on those farms that are being subdivided. Plot 31 is one of the typical success stories of housing provision. Pear Ville housing cooperative subdivided 96 housing units, which range between 325-723m². A private developer has developed tarred road, tapped water is available as well as a sewer system. The major challenge is refuse collection; the council only collects refuse ounce a month. A private developer Realty Developer (Zim-Properties) in Plot 32 is selling 75 medium density residential stands to ranging between (375-723 m²).

At the foot of the mountain on Chimwasa plot, NSSA has developed a housing mortgage scheme. The financier is National Building Society Bank (NBS Bank) 152 four-roomed houses all measuring 300m² have been constructed. Water and sewer have not yet been connected. A key informant from NSSA highlighted that technical factors caused by the mountainous location of the housing scheme is delaying the servicing of water and sewer. Moreover, due to the introduction of the mono-currency system by government, price distortions have had a negative effect on the mortgage facility. Thus, affecting the rate of uptake from potential beneficiaries. There is a proposed phase 2 on the same plot by Home-link. Apart from population increase, the geographical nature of the city is also having a bearing on the causes of horizontal urban expansion. Having noted all these experiences and contributions by these mountains, participation should extend from the international or national to the local level and should involve all stakeholder groups including central government, scientists and technicians, local communities, the private sector, and N.G.Os. Fiszbeign and Lowden (1999) added that local livelihoods play a particularly important role and inhabitants of mountain regions should be actively and continuously involved in the planning, implementation and follow up of development activities

CHALLENGES

The sustainability and resilience of housing provision in Weirmouth is affected by an array of challenges chief among them physical factors represented by 32.4 %. The interaction of spatial phenomena such as steep terrain and population growth has a negative bearing on sustainable housing resilience

scheme as it outstrips the capacity of Mutare Local Authority to provide housing. This has been manifested through self-built slums in Chikanga area that are devoid of proper sanitation and water supply. Moreover, there is a correlation between exponential population growth and demand for land, a scenario that provides leeway for slumification. The outward expansion increases the need for a vehicular mode of transportation to get to and from town as the distances are increasing. There is also an increased need for water and sewer infrastructure expansion. Financial challenges account for 25 % engulfing the residence in their quest to achieve sustainable resilience housing, just like the rest of urban spaces in Zimbabwe. The City of Mutare has not been spared from economic challenges that are curtailing the operation of housing developers and financiers. Such an arrangement is stalling the private-public relationship in housing provision. For instance, since the introduction of a mono-currency system, the National Social Security Authority has suspended its operations owing to property market fluctuations and distortions. The mixed land-use emanate from the greenlight which have been given to the plot holders to subdivide the land, hence some plot holders are still reluctant to do so as they still engage in horticulture production as was the case with Plot 28.

Table 1: Challenges to Housing Provision in Weirmouth plots (Survey, 2019)

	Frequency	Percent	Valid Percent
Financial challenges	70	25.3	25.3
Mixed Land-use	45	16.2	16.2
Population Increase	72	26	26
Physical factors	90	32.49097	32.49097
Total	277	100	100

Observations indicate that arable land that was used to produce food for the urban inhabitants is being converted to residential use and this is a threat to food security. This provides a threat to urban agriculture which is the mainstay of urban livelihoods. With Zimbabwe’s economic decline since the new millennium, the agriculture sector has not been spared. A plot holder noted that housing provision is an economic resilience strategy since agricultural production has been on the decline. Moreover, the cost of providing public

services such as water supply, sanitation, electricity, public transport, waste management, is high. This entails that either the quality of these services will be low or that significant subsidies will be required to cover the costs of provision.

DISCUSSION

The successful implementation and enforcement of planning policies and land-use plans is important. Weirmouth is an area set aside for market gardening as its major economic activity but due to shortage of land from the inner part of the CBD, agricultural land is being converted into various uses to meet land-use demands. This shows unsuccessful enforcement of land-use plans by the local government as one of the reasons of horizontal urban expansion in developing countries (Harvey and Clark, 2005). Urban studies and authorities argued that infrastructure such as roads, water, and sewerage lines and schools is more cost demanding under expansion than under higher density urban development (Duensing, 2007; Frank, 2009; Duncan, 2009). This explains why; in spite of the macroeconomic challenges affecting the country. Infrastructure service provision in Weirmouth is a great challenge.

By and large, the rapid development of land for urban multiple purposes including housing, production, retail, leisure and the resultant loss of built heritage, natural open spaces agricultural land and pristine green spaces are universal effects as well as consequences of horizontal urban expansion (Chin, 2002). In many communities with regard to future trends in many communities, rapid urban development has led to growing concern that in the near future; ultimately open space will be more remote and inaccessible to most city dwellers. Among other areas, loss of prime agricultural land is a great recurring concern of residents (Goldberg, 2009). Most planners and policymakers believe that horizontal urban expansion eliminates more farmland from agricultural uses than other compact forms of expansion.

The study noted that people who live in sprawling urban fringe areas tend to have more space as houses are spaced out on larger tracts of land. According to Bhatta *et al.* (2010), the set up itself is not rural in nature but offers much more breathing room than a crowded city block full of apartments. Despite the issue of space, the cost of land is much cheaper meaning that residents can save money. A comparable residence within the higher density city limits would probably cost more. Barton (2009) asserts that the outward growth of the urban environment promotes quietness within the neighbourhoods

since in these areas there will be less traffic. Therefore, the study noted that housing provision in Weirmouth decongested population in the city as well as consuming more space in the peripheries of Mutare.

Infrastructure such as roads, power lines, sewerage system, and water is developing in the area. Ewing (1997) highlighted that in urban fringes infrastructure is a luxury. Thus, if infrastructure improves, this means that prospects of local economic development will be higher. Furthermore, since urban centres attract a lot of people due to unique service provision, there are high levels of crime but if the town or city is sprawling outwards this entails that the levels of crime rate will increase. Furthermore, the research revealed that horizontal urban expansion destroys a sense of community. Weirmouth is located about 10 km out of the Mutare CBD and in a way this isolates people with those who reside in other residential location such as Chikanga and Sakubva. Horizontal urban expansion leads to social problems such as declining social capital and personal neighbourhood ties between residents (Burchell *et al.* 2008, Ewing, 1997, Calthorpe, 2003). Generally, low-density expansion development makes households connections weak in two directions primarily in the close neighbourhoods and then to the larger metropolitan community urge strongly unsociable values. In the small scale, social linkages with residents in a close neighbourhood are reduced due to several reasons such as low level of residential density, heavy dependence on cars and lack of accessible local retail outlets. In the larger scale of the city, civic linkages with other citizens are also weakened by the forested governmental fragmentation and separated economic resources that avoid commonality of purpose among residents or even make laws for the diffusion of accommodation and workplace in an area. As a result, loss of sense of community provides difficulties in generating support for social and local attacks, which need actions more than local policies (Burchell *et al.* 1998; Goetz, 2002)

Due to some financial challenges that are being faced by Mutare City Council and other various stakeholders involved in development, the available alternatives to outward growth of the city are cost demanding. Providing services such as water, sewers and electricity are also more expensive per household in less dense areas. This calls for a greater need for Public-Private Partnerships (PPPs). More so financial challenges also affect residents. Alonso (2001) noted that residents of low-density areas spend a higher proportion of their income on transportation than those of high-density areas. From the research, it has been proven that at the time of inquiry the majority of

residents in Weirmouth were spending 4RTGS per day on public transport commuting to work in the CBD taking much of their monthly income. Thus, horizontal urban expansion is a result of lack of financial resources to implement other best alternatives such as vertical development.

CONCLUSION AND POLICY OPTIONS

Rapid urban population growth has led to an increase in housing demand. Horizontal expansion in Mutare is limited by mountainous landscape. Thus, this has led to rezoning, consequently leading to mixed land-use in Weirmouth. Several challenges in housing provision were noted ranging from institutional, technical, environmental, economic and social. The study noted the need for Public-Private Partnerships to ensure sustainable land management in Weirmouth. Since the local authority does not have adequate funds to provide infrastructure services, there is need to adopt Public-Private Partnerships in housing provision. Partnerships with the government, private sector, academic scientists and other stakeholders helps provide capacity and a diversity of perspectives to sustainable housing resilience planning. Particularly collaborating with scientists may be important in order to identify possible risks and uncertainties to inform resilience planning. There is a need to carry out a study on the prospects of vertical construction over horizontal urban expansion since Mutare is a mountainous area with limited land for urban expansion.

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