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Assessment of the triple-bottom line for development and management of human settlements: Case study of ward 12, uMlalazi local municipality, South Africa

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Abstract: The global adoption of sustainable development practices is gaining momentum, with an increasing emphasis on balancing the social, economic, and environmental pillars of sustainability. This study aims to assess the current state of these pillars within the uMlalazi Local Municipality, South Africa, and evaluate the initiatives in place to address related challenges. The purpose is to gain a deeper understanding of how effectively these three pillars are being addressed in the context of local governance. Using qualitative research methods, the study gathered data from a sample of five key informants, including three local government officials, one councillor, and one chief information officer from the local police. Data was collected through open-ended interview questions, with responses recorded, transcribed, and analysed for thematic content. The findings reveal significant gaps in the municipality's approach to sustainability, including the absence of formalized trading areas, limited community input in planning and decision-making, high crime rates, and persistent unemployment. These issues were found to be interlinked with other challenges, such as inefficiencies in solid waste management. Additionally, the study confirms that the three pillars of sustainability are not treated equally, with economic and social aspects often receiving less attention compared to environmental concerns. This highlights the need for the municipality to focus on formalizing trading areas, encouraging local economic growth, and enhancing public participation in governance. By implementing incentives for greater community involvement and addressing the imbalances between the sustainability pillars, uMlalazi can make significant progress toward achieving more sustainable development.

Keywords: sustainable development; human settlements; uMlalazi; public participation

1. Introduction

Sustainable development has become a critical focus of global discourse, driven by the increasing urgency to address interconnected economic, environmental, and social challenges. As the world grapples with climate change, resource depletion, and socio-economic inequalities, new frameworks are needed to guide development efforts that foster long-term resilience. One such approach is the Triple Bottom Line (TBL) framework, introduced by John Elkington in the 1990s, which emphasizes the importance of balancing economic, environmental, and social objectives (Hammer and Pivo, 2017; Nogueira et al., 2023). The TBL framework provides a more comprehensive evaluation of sustainability, surpassing the traditional focus on economic indicators and integrating broader societal and environmental considerations. Over the years, TBL has gained substantial traction across sectors, including businesses, nonprofits, and governments, as it offers a holistic approach to

measuring progress (Loviscek, 2021).

However, despite its widespread adoption, the practical implementation of the TBL framework presents significant challenges. Many organizations struggle to give equal weight to its three pillars, often prioritizing economic growth at the expense of social and environmental outcomes (Loviscek, 2021). These implementation gaps raise questions about the overall effectiveness of TBL in achieving truly sustainable development. Existing literature highlights the need for more nuanced approaches that address these challenges and offer practical solutions for aligning all three dimensions of sustainability (Nogueira et al., 2023).

This gap in effective implementation is particularly relevant in developing countries like South Africa, where historical inequalities and contemporary governance pressures create unique challenges for sustainable development. In this context, the TBL framework can provide valuable insights into how local governments manage the complexities of fostering equitable economic growth, protecting the environment, and addressing social inequities (Swilling and Annecke, 2012). South African municipalities, which face significant socio-economic disparities and uneven infrastructure development, are crucial sites for examining the integration of TBL principles into governance and development strategies.

This study focuses on the uMlalazi Local Municipality in South Africa's KwaZulu-Natal Province as a case study to explore these dynamics. uMlalazi is characterized by a diverse population and a mix of urban and rural environments, particularly within Ward 12, where socio-economic inequalities and developmental challenges are pronounced. The municipality's reliance on both formal and informal economic activities, coupled with disparities in infrastructure, makes it a compelling case for assessing the practical application of the TBL framework at the local level.

Despite an expanding body of research on sustainable human settlements and municipal planning (Ntakana et al., 2023; Smit and Parnell, 2018; Todes, 2014), there remains a critical need to examine how the TBL framework can be better integrated into local governance practices. This study seeks to fill this gap by analysing how the uMlalazi Local Municipality balances the TBL dimensions in its development and management strategies, particularly within Ward 12. The research will address three key questions:

- 1) How effectively has the uMlalazi Local Municipality integrated the principles of the triple bottom line in the development and management of Ward 12?
- 2) What are the key economic, environmental, and social outcomes observed in Ward 12 as a result of these initiatives?
- 3) What are the main challenges and opportunities identified in the pursuit of sustainable development within the uMlalazi Local Municipality?

By answering these questions, this research aims to contribute to the growing literature on sustainable development in local governance by providing insights into best practices and identifying areas for improvement. This study's novelty lies in its focus on a South African municipality, where the intersection of historical legacies and contemporary development efforts offers a unique perspective on the TBL framework's practical application. The paper is organized as follows: section two reviews existing literature on the TBL framework in local government contexts, section three outlines the research methodology including an overview of uMlalazi

Local Municipality, section four, discusses the findings, and section five presents' conclusions and recommendations for future action.

2. Literature review

Urban sustainability, encompassing economic, social, and environmental dimensions, has become a focal point in urban studies, emphasizing the need for holistic approaches to address challenges in urban development and management. Sustainable development integrates economic growth, social equity, and environmental protection to ensure long-term well-being and resilience (Herrick and Vogel, 2023). This “three pillars” approach has been widely adopted but criticized for oversimplification. Scholars argue for a more nuanced understanding that considers local contexts, community engagement, and well-being (Peterson, 2016).

In the context of uMlalazi municipality, situated in a peri-urban area with a mix of urban and rural characteristics, the development and management of human settlements are crucial for achieving sustainability. The municipality faces challenges such as rapid urbanization, inadequate infrastructure, and limited resources, which require innovative governance mechanisms and active public participation (Sibiya and Brent, 2019). Local governance plays a critical role in promoting sustainability by facilitating effective decision-making, resource allocation, and public engagement (Nkambule and Ntakana, 2024).

The concept of sustainability is often represented by the sustainability triad, comprising social, economic, and environmental dimensions. This three-pillar model, commonly depicted as intersecting circles, has become ubiquitous in sustainability discourse (Purvis et al., 2018). This is usually represented in the sustainability triad shown below. In **Figure 1** below, sustainability is depicted by three overlapping circles that represent the social, economic, and environmental dimensions.

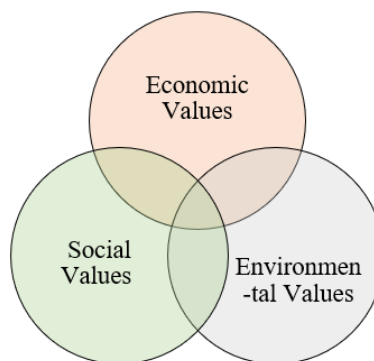


Figure 1. The sustainability triad.

Source: authors' construction.

The economic dimension represents the systems of production, distribution, and consumption of wealth, which is generally defined as the means of the satisfaction of the material needs of the people. Brown et al. (1987) define the social dimension as a system of living or the association of groups or communities and considers it as the improvement of humanity's standard of living. The same authors also go on to defining the environmental dimension as that which is concerned with the provision of integrity and the preservation of ecosystems and the on-going productivity and

functionality of the ecosystem.

2.1. Environmental sustainability

uMlalazi Local Municipality faces numerous environmental sustainability challenges, including water scarcity, waste management, and biodiversity conservation. Academic debates surrounding uMlalazi's environmental sustainability often focus on the municipality's strategies for mitigating environmental degradation and promoting sustainable development. One key debate revolves around water resource management in uMlalazi. The municipality, like many in South Africa, grapples with water scarcity exacerbated by climate change and population growth. Scholars argue that effective water management requires not only infrastructure development but also community involvement and sustainable practices (Nhamo et al., 2019).

Waste management is another critical issue in uMlalazi, with challenges related to inadequate infrastructure and informal waste disposal practices. Academic discussions emphasize the need for integrated waste management systems that prioritize recycling and waste minimization, alongside community education and engagement (Oelofse et al., 2014). Biodiversity conservation is also a focal point in uMlalazi's environmental sustainability discourse, given its rich ecological diversity. Scholars highlight the importance of preserving natural habitats and species, calling for collaborative efforts between government, communities, and conservation organizations (Driver et al., 2012).

To address these challenges, the uMlalazi municipality has implemented various environmental management strategies, including the development of environmental management plans and the establishment of environmental committees. However, scholars argue that these efforts need to be strengthened through increased funding, capacity building, and stakeholder participation (Nhamo et al., 2019). Molden et al. (2012) provide that the management of natural resources should be a top priority, because social and economic development need to have a healthy environmental foundation to flourish. Solid waste management is characterised by underdevelopment of organisational public waste collection systems. Solid waste collected is not quantified nor are the different types distinguished and categorised. Mmerekhi et al. (2016) further provide that the categorisation of solid waste is hindered by the unavailability of technologies and good practice. There is inadequate and inappropriate equipment for the collection of sorted solid waste, and there is a general lack of interest by the decision makers in the subject matter, which leads to poor decision being made.

Municipalities play a crucial role in driving sustainable practices and achieving Sustainable Development Goals (SDGs) at the local level (Lähteenoja et al., 2021). They act as leaders in implementing sustainability initiatives, particularly in urban areas (Axelsson et al., 2023). Burstrom (2000) provides that to achieve environmental sustainability there is a need for a more strategic and integrated approach to municipal environmental management. The municipality is the closest tier of government to the people, and as such, it is best suited to implement the strategies of environmental sustainability. Solid waste management in South Africa is governed by the National

Environmental Management Waste Act no. 59 of 2008. Section 22 of the act places a responsibility on the citizens which may have waste to be collected by the municipality, which is to place the waste in a container that has been approved and/or provided by the municipality. Any waste that is to be recycled, re-used, or reduced is to be placed in a different container. Therefore, it is clear from the provision made above that both the citizen and the local authority have a responsibility to perform.

2.2. Economic sustainability

Economic sustainability in uMlalazi Local Municipality, like many municipalities in South Africa, is a complex issue influenced by factors such as unemployment, poverty, and limited economic opportunities. Academic debates often centre around strategies for promoting economic growth, job creation, and poverty alleviation while ensuring long-term economic viability and resilience. One key debate revolves around the role of small and medium enterprises (SMEs) in driving economic development in uMlalazi. Scholars argue that supporting SMEs through access to finance, markets, and business development services can stimulate local economic growth and create employment opportunities (Rwigema and Venter, 2019).

Another critical issue is the promotion of tourism as a key economic driver in uMlalazi. The municipality, with its coastal location and natural beauty, has significant tourism potential. Academic discussions emphasize the importance of sustainable tourism practices that benefit local communities while preserving the environment (Saayman and Saayman, 2012). Infrastructure development is also a focal point in debates on economic sustainability in uMlalazi. Scholars argue that investment in infrastructure, such as roads, water supply, and electricity, is crucial for attracting investors, creating jobs, and improving the quality of life for residents (Moyi, 2017).

To address these challenges, the uMlalazi municipality has implemented various economic development strategies, including the development of a Local Economic Development (LED) strategy and the establishment of business support programs. However, scholars highlight the need for these efforts to be more inclusive, transparent, and aligned with local development priorities (Rwigema and Venter, 2019).

Moldan et al, 2012 agree that a sustainable economy should fundamentally focus on man-made, natural, human, and social capital. The resource utilisation should not affect future income or the ability of the future generation to utilise the same resources. It should consider the ecological system and the intergenerational distribution of equity under the optimum growth conditions. Local Economic Development (LED) is a crucial process for fostering economic growth and improving quality of life at the community level. It involves collaboration between local authorities, public organizations, NGOs, and businesses to create a better business environment (Mkhize and Mutereko, 2022). Nel (2001) identifies LED strategies commonly used by the local authorities which include, but are not limited to, financial support which comprises of tax incentives, loan guarantees and or equity participation and investment packages; land and building developments which comprises of infrastructure developments and land acquisition, agricultural support and urban regeneration; the strategies also include information and marketing assistance, new planning and

organisational structures and lastly training and empowerment of youth and potential entrepreneurs.

Section 152 (c) and 153 (a) of the Constitution of Republic of South Africa provides that the local government must promote social and economic development, and as such the administration, budgeting and the planning processes must be structured to give priority to the basic needs of the community and to promote the social and economic development thereof. National Treasury (2009) indicated that the residents of a township spend most of their disposable income outside of the township and considers that if more attractive and cheaper shopping facilities were made available, one would see a result of more than double local spending and that would contribute towards retaining the existing residents and attracting new middle-income residents to the townships. However, a balance needs to be found so that in the process, local businesses are not put out by the developments.

From the international context, it has been found that underdeveloped regions are riskier signalling a poverty vicious cycle. Hromada et al. (2023) investigated the impact of crisis on the real estate market in two regions of the Czech Republic (Prague and Karlovy Vary). Prague represented the rich and developed regions, while Karlovy Vary struggles with many socio-economic and structural problems. In their analysis, they concluded that, in the poorer region (Karlovy Vary), they anticipate a larger and wider magnitude of the price cycle and a slower recovery of the real estate market, proving the existence of long-lasting disequilibrium and delayed market adjustment mechanisms. Simultaneously, there is a greater downward rigidity in prices in the high-end property market segment as well as in the region with high property prices (Prague). Nkoro and Otto (2023) investigated the impact of fiscal federalism on economic development in Nigeria over the period 1981 to 2020 using time series data. They found that in the long run, revenue and expenditure decentralisation promote economic development in Nigeria. Their study concludes that, in light of these findings, Nigerian local and state governments ought to have greater fiscal authority via suitable legislation and reforms. The quality of public services will rise as more fiscal authority is transferred to local and state governments, hence improving the welfare of Nigerians. As these will support macroeconomic stability, a positive trade balance, and the development of human and physical capital, they must also be put into place in order to support Nigeria's long-term economic growth.

2.3. Social sustainability

Social sustainability should primarily address the permanence of social values, relationships, identities and institutions with common goals and social cohesion as an integral factor. Social infrastructure and resources such as health, education, food, water, and housing should be provided and sustained for every member of the society. The creation and maintenance of skills for individuals as well as for future generations should be actively supported (Moldan et al, 2012; Longoni and Cagliano, 2015). Opp and Osgood (2013) state that social sustainability has become synonymous with environmental protection. McKenzie (2004) supports this statement by mentioning that the environmental dimension is the most researched and well defined of the three.

Social sustainability is a crucial dimension of sustainable development,

encompassing two main aspects: social equity and community sustainability (Dempsey et al., 2011). Social equity includes access to opportunities and to services that are essential in the local communities. The sustainability of the community comprises of a few subdimensions which include pride in the community and attachment to the neighbourhood, social interaction between the neighbours, and a sense of safety and security from crime and antisocial behaviours. It is important that a balance be found between the three pillars of sustainability in order to realise the overarching phenomenon of sustainable development (Herrick and Vogel, 2023).

Seguin and Germain (2000) identify a range of factors that could have a negative impact on the state of the community's social sustainability. These are the localised effects of the national government's policies; health and education; infrastructure and housing; local urban management and historical factors. The issue of whether local or national government bears more responsibility for social sustainability can then be raised. Du Toit et al. (2018) carried out a phenomenological study on the life of unemployed persons residing in townships. The respondents were asked to describe what being unemployed feels like when living in the township, and responses such as "danger and death", "life is over" and other descriptive phrases surfaced. The same respondents were asked what living in the township is like and responses were describing how it is a filthy, painful, and forgotten place. Infrastructure in townships is often dilapidated, and the resources are not adequate. Townships offer no job opportunities and are often situated far from economic hubs.

Umlalazi Local Municipality IDP (2018) provides that there is poor public participation and the initiative to promote it are also in a very poor state. Plessing (2006) mentions that public participation, apart from being a democratic practice, is a tool to increase the effectiveness and efficiency of development projects and public works programmes and the like. Cornwall (2000) presents the three main arguments presented on the need of public participation as, "participation enhances the effectiveness of development, it is an expression of people's right to self-determination and that it provides a space for mutual learning". While analysing these arguments, one may immediately realise that they are key requirements towards the realisation of social cohesion and sustainability in a community, without which, it may be impossible to realise the sustainability of a human settlements in its entirety.

Amtaika (2010) provides that crime is not only a social issue, but it also has a negative impact on the essential principles of humanity, which include the ability to freely live a peaceful and happy life. It is also mentioned that the emergence of violent crimes came as a result of culture of violence and resistance in an attempt to overthrow the apartheid government. uMlalazi Local Municipality (2018) provides that it has challenges with a high crime rate, and this has a negative impact on the economic development and GDP of the area. Given that HIV/AIDS is one of the major issues facing South Africa and that uMlalazi Local Municipality (2018) is the study location where high infection rates are still being reported. Van Niekerk (2001) and Stadler (2003) reach a similar conclusion on illiteracy and misinformation being the major reasons to the stigmatisation of the HIV victims. These further reinforce myths and beliefs held by people on the reasons for infections, the reasons include witchcraft, immoral and sinful behaviour on the part of the victim. Forsyth et al. (2008) provides that more than half of the respondents agreed with the statements that the primary

cause of HIV/AIDS infections was a result of poverty.

3. Research methodology

To conduct this investigation, both a comprehensive literature review and a qualitative empirical study were undertaken. The following subsections detail the site description, the research instruments, sampling strategy, sample size, as well as the methods employed for data collection and analysis. The primary objective of this research is to gain a deeper understanding of how effectively the TBL framework is being implemented within local governance structures in South Africa, with the aim of promoting sustainable development.

3.1. Site description

Within the KwaZulu-Natal Province of the Republic of South Africa, the uMlalazi Municipality is a local municipality situated in the King Cetshwayo District Municipality. uMlalazi is composed of three small towns: Gingindlovu, Mtunzini, and Eshowe. The economy of the municipal region is reliant on the agriculture industry. The bulk of workers are employed in this industry, which makes for 33% of the GDP (Jili et al, 2017). The topography of the uMlalazi Municipality is undulating, which presents certain challenges for the provision of engineering services. Furthermore, the municipal area, which is among South Africa's largest local authority regions, spans about 2217 km². The municipality features a 17 km stretch of coastline that borders the Indian Ocean (Ore et al, 2023). A wide, continuous belt of commercial farming fields runs the length of the municipal territory, stretching from the west of Eshowe to Gingindlovu and north of Mtunzini. Tribal authority territory makes up the remaining portion of the region, and it has not been well managed. Many major routes pass through the uMlalazi Municipality. These include the R34 that runs between Richards Bay/Empangeni and the Nkwaleni valley north of Eshowe, the N2 Motorway that connects Durban and Richards Bay, and the R66 that runs from the N2 Motorway to Gingindlovu, Eshowe, Melmoth, Ulundi, and Vryheid. (see **Figure 2**)



Figure 2. uMlalazi locality map.

Source: King Cetshwayo District Municipality, website: <https://www.kingcetshwayo.gov.za/>.

3.2. Measurement instrument

The research employed the qualitative research methods as a result of its aim to dig deep to obtain a complete understand of a phenomenon that one is studying (Leedy and Ormrod, 2015). Patton and Cochran (2002) provide that qualitative research

methods are characterised by the aim which relates to the comprehension of some aspects of social life and its methods that tend to generate words as the data to be analysed, unlike the quantitative methods, qualitative research does not make use of any statistical measure or means of quantification to arrive at its findings. With the purpose of the study being to assess the implementation of the three pillars of sustainable development in ward 12 of uMlalazi Local Municipality, the questions which were asked had the potential to give an in-depth understanding of the phenomenon in the area of study. As the aim of the study was to develop a deeper understanding of phenomenon, the best sub-design was a phenomenological study approach. According to Leedy and Ormrod (2015), a phenomenological study attempts to examine from the perspective of people, their perceptions relative to a certain situation or phenomenon.

Holiday (2002) and Creswell (2007) also provide that the phenomenological approach allows for nothing be taken for granted in the field and also requires the setting aside of any pre-determined views or personal practices which may improperly influence what is heard by the researcher. This does indeed add to the overall objectivity of qualitative research and the phenomenological study approach. Creswell (2007) suggested interviews as the primary data collection method for a phenomenological study approach, amongst the alternatives which include the studying of existing documentation, observations, and art as sources of data. In a study conducted by Silvana Dushku from 1995 to 1999, evaluating the English language aid programs in Albania, there was a concurrent use of individual and focus group interviews. Individual interviews were used with the people who held positions of leadership and focus groups with the general public. This can be convenient as a result of the frequent unavailability of people who hold positions of leadership in any entity or the community. This study opted to make use of individual interviews with bureaucrats and community leaders, because of time constraints. The semi-structured interviews were audiotaped, at the consent of the interviewee and transcribed.

3.3. Sampling procedure, size and data collection

This study employed a convenience sampling strategy as a result of the limited time related resources and also as a result of the predetermined respondents that were deemed to give responses that were most reliable and representative of the populace of ward 12. The respondents targeted and interviewed were as follows: one ward councillor; one SAPS official from crime information management centre; one municipal environmental manager; one municipal LED manager; one official from the department of social development. These respondents were chosen to give a response that will cover the three pillars of sustainable development. According to Creswell (2007) and Marshall (1996) agree that the convenience sampling strategy save time and financial resources, but however, it does so at the expense of the credibility of the data retrieved. That is however mitigated by the fact that the sample consists of predetermined professionals that are experienced in the field of research's sub-theme, and leaders that represent the views of the people. Onwuegbuzie and Collins (2007) also provide that if the intention of the study is not to make a generalisation, but rather to gain a deep insight or understanding of a phenomenon, then the researcher has the

discretion to opt to use a purposeful or convenient sampling strategy, by selecting individuals, groups, and the setting of the phase in order to maximise the understanding of the underlying phenomenon.

3.4. Data analysis technique

In analysing the data collected, the researcher acknowledged their personal experience of Ward 12 and their opinions on the implementation of the three pillars of sustainable development—social, economic, and environmental. This reflexive approach facilitated an objective analysis by ensuring that the researcher’s personal experiences and perspectives did not bias the interpretation of the data. By explicitly identifying and setting aside these subjective views, the analysis remained focused on the descriptions provided by the respondents.

The interview questions elicited responses that helped describe the state of each sustainability pillar, which served as the primary themes under investigation. Significant statements from the responses were identified and treated impartially, then categorized into broader units representing the social, economic, or environmental dimensions. The significant statements were considered particularly valuable for their relevance to the themes and the research context.

Following this, the researcher synthesized the respondents’ experiences into a textural description, which provided a detailed account of their perceptions and insights regarding the themes. Additionally, a structural description was developed, offering context and setting for the phenomenon under study. The integration of both textural and structural descriptions allowed for a comprehensive understanding of the respondents’ experiences.

The final analysis culminated in a composite narrative that integrated the social, economic, and environmental themes. This holistic perspective provided deeper insight into the sustainability challenges and opportunities within Ward 12, offering a multidimensional view of the area’s development dynamics.

4. Results and discussions

Five respondents participated in the study, whose pertinent biographical information is displayed in **Table 1** below.

Table 1. Biographical data of respondents.

ID	D1	D2	D3	D4	D5
Gender	Male	Male	Male	Female	Male
Age	36–50	>51	36–50	19–35	19–35
Education	Secondary	Tertiary	Tertiary	Tertiary	Tertiary
Employer	South African police service	Umlalazi	Local government	Local government	Local government
Department	Chief information office	Councillor for Ward 12	Local economic development	Social development	Environmental services

Source: authors’ construction.

4.1. Economic sustainability

To better understand the state of economic sustainability of ward 12, some open-

ended questions were asked to the respondents, with answers anticipated from D2 and D3, respectively, the councillor of ward 12 and the LED manager. The questions and the transcribed responses are presented below.

4.1.1. Description of the local economy of ward 12

“One can safely say it is a one-sided category of informal business; it mainly comprises hawkers and three to four shopping stores.”—D2.

Ward 12 of uMlalazi local municipality is, as expected, a typical township without formalized trading facilities. This is what causes a huge portion of the township’s disposable income to be spent outside of the township. This is reiterated by D3, accentuates that the township has very limited resources that could assist in terms of strengthening the local economy and creating more employment for the masses. However, there is still an opportunity for commercial activity to take place, through the formalization of the economy.

“Basically, it is informal, in terms of the tourism law; there are no heritage sites; in terms of agriculture limited space; it’s just pure ‘location’ with spaza shops tuck-shops and a few stores which are privately owned and most of these things are not formalized, so it is just an informal economy.”—D3.

These findings contribute to the broader discourse on sustainable development by highlighting the structural economic challenges faced by underdeveloped urban areas in South Africa. The lack of formalized economic infrastructure in Ward 12 not only limits local economic growth but also reflects a wider pattern of economic marginalization observed in many townships across the country. The insights from this study suggest that addressing the informality of local economies through targeted interventions—such as formalizing trading facilities and providing resources for small businesses—could lead to enhanced local economic development, reduced income leakage, and greater job creation (Rwigema and Venter, 2019).

4.1.2. Efforts being made to develop formalized trading areas

“We are of the view that our shopping business centre should be revamped”—D2.

The provision of such a facility would centralise the availability of these skills, which would in turn boost competition and quality service provision. An opportunity for education and training in such skills would also arise in the study area. This initiative will contribute to the sustainability of the study area.

“There are three projects, the first one is the one near Siza garage, where a private developer, in conjunction with the municipality wants to build a mall. The second one is the properties that are owned by the Department of Agriculture, so these are in the process of being transferred to the municipality, so that the people can utilize them for business. The third one, it’s around the taxi rank, with the municipality who is going to build structures for informal traders.”—D3.

D3 provides two more proposed initiatives which will assist in the development of formalised trading areas. The proposed mall by a private developer falls within the boundaries of ward 12 and as such will have a positive impact on the residents of the study area.

There are also vacant buildings that used are under the ownership of the department of agriculture, but are no longer in use now, as the department has

relocated. These buildings are vulnerable to vandalism, the municipality has commenced the process of legally changing the ownership of these buildings so that they can be utilised by the youth in entrepreneurship. This strategy by the municipality aims at creating more formalised trading areas, while at the same time supporting and empowering the youth of the area in its endeavours.

These findings not only highlight local efforts to stimulate economic development through the formalization of trading spaces but also underscore the importance of municipal initiatives in fostering sustainable development. The proposed projects aim to address the township's economic informality by creating formalized infrastructure, thereby empowering local entrepreneurs and enhancing economic resilience. By involving private developers and utilizing existing municipal assets, these initiatives promote local economic growth while simultaneously addressing social equity by providing opportunities for marginalized groups, such as unemployed youth (Rwigema and Venter, 2019).

4.1.3. LED strategies used to develop the economy

“We established a Department (the Youth Advisory Centre) as most of the problems or challenges are faced by the youth. The Department is there to assist in terms of the registration of businesses and then to assist in terms of funding, business plans and all those things.”—D3.

It is evident that the municipality is determined to assist entrepreneurs in the area and have also developed a few initiatives to realise the vision they have for the area through the people. They have also realised that it is of intrinsic importance that they focus on the youth, who are the leaders of tomorrow, utilising existing resources maximises efficiency and maximised efficiency creates sustainability. The municipality realises that it does not have many resources available in the ward and have opted to positively manipulated the existing resources to develop the economy.

These findings offer valuable insights that extend beyond the local context. Many municipalities across South Africa face similar constraints in terms of limited resources and high youth unemployment rates. The uMlalazi municipality's strategy of leveraging existing resources to support youth entrepreneurship provides a model for other regions grappling with similar challenges. By focusing on empowering the youth, municipalities can cultivate a new generation of entrepreneurs who contribute to local economic development and long-term sustainability (Nel, 2001).

4.1.4. The challenges faced in the implementation of the LED strategy

“Limited land as well as land ownership, in terms of expansion the township cannot expand anymore because of the way that it is geographically located. And the ownership, that we mentioned where the properties are owned by the respective government departments, it is a challenge as the ownership of these properties takes time to be transferred.”—D3.

The response from D3 suggests that there is an oversupply of a skill that has minimal demand. For the economy to grow and thrive sustainably, there needs to be an alignment between the skills provided by the institutions of higher education and training, and the local market. In addition, D2 also provides that, “Eshowe as a town and uMlalazi as a municipality are not an industrially active and attractive area. We depend significantly on civil servants such as police officers, teachers, administrators,

and nurses as well retail shop employees. We also lack vision, as a municipality, on how to expand our economy.” D2 provides that the local government has not realised the capacity to be innovative in the expansion of its economy. The local economy is said to be dependent on an economic base that is not flexible enough to grow the economy. (see **Figure 3**)

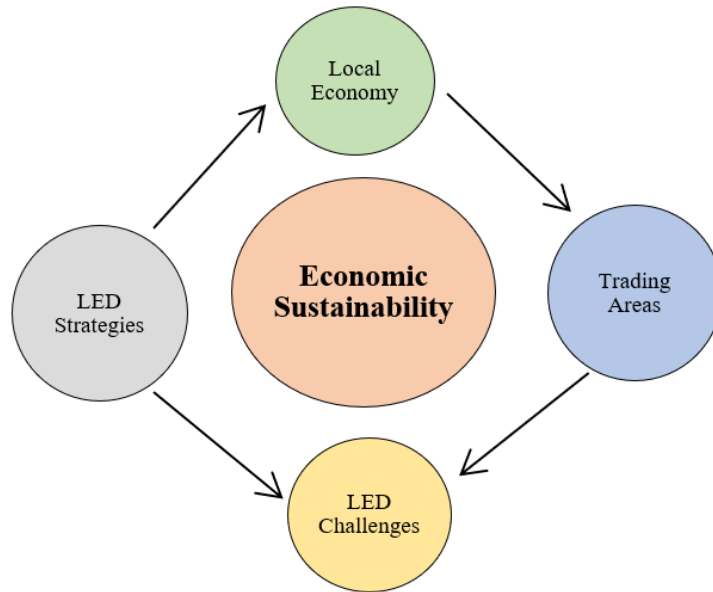


Figure 3. The uMlalazi economic cycle.

Source: author’s construction.

At a broader scale, these findings contribute to the discourse on regional development and urban sustainability. They emphasize the importance of integrated planning that takes into account both land-use challenges and human capital development. The experience of uMlalazi underscores the need for a shift in focus from reliance on static economic sectors to more innovative and diversified approaches that can better meet the evolving needs of local markets. Such strategies could be applied to similar municipalities across South Africa and other developing regions, promoting sustainable economic growth and resilience.

4.2. Social sustainability

Researchers interviewed key figures in ward 12, including police, social services, and the local councillor, to assess the area’s social sustainability. These people were chosen because of their deep involvement in the community’s social issues.

4.2.1. A description of the social sustainability of the area

“High crime zones, that is proven with a study, forty-five percent of the crimes generated in the Eshowe policing area, are from ward 12.”—D1.

From the response of D1, one can immediately pick up that there is a high crime rate in the study area, which is in fact a cascading effect, from the lack of employment opportunities, inter alia, as discussed previously. While defining the social sustainability in ward 12, D2 mentions:

“Our community in King Dinuzulu are passive, it is not proactive, and it is not active, it is very passive.”

The community does not actively involve itself in the activities of planning and decision-making. This causes a disconnect between these members of the community and the proceedings of the community. Community members that do not attend community meeting, will not be privy of the resolutions that were made at the meetings, and subsequently will not know what is expected of them. The continuation of such a cycle in a community can be foreseen to cripple the sustainability of the settlement, as the compromise of the integrity of one pillar can cause it to knock over the following pillar, which ultimately results in a cascading effect. D4 completes the definition by contributing that,

“I as a social worker, have been working in Ward 12, the social sustainability is fair. However, it is affected by the social ills that are within, for example substance abuse, it contributes to the crime.”

Substance abuse is one of the main factors that contribute to the high rates of crime in the study area. One may identify a cycle in social instability of the study area. The lack of employment causes stress and depression to the point of substance abuse, which then to keep up, causes the very same individuals to resort to crime in order to attain the funds to procure the substance abused. The cycle can begin at any of its three components but generally includes all of them.

These findings emphasize the critical role of community engagement in promoting social sustainability. A passive and disconnected community is less likely to participate in efforts to address its own challenges, leading to a breakdown in the social fabric that can perpetuate poverty, crime, and instability (Nhamo et al., 2019; Peterson, 2016). Policymakers and urban planners must prioritize community participation, create employment opportunities, and implement programs to address substance abuse as part of comprehensive strategies for sustainable urban development. By addressing these interlinked issues, other municipalities facing similar challenges can break the cycle of social instability and create more resilient, inclusive, and sustainable communities.

4.2.2. The way in which the unemployed are assisted to mitigate the consequences of unemployment

In response to the initiatives brought forward to mitigate the consequences of unemployment, D2 responds,

“Although unemployment is high, and as I was born and bred here, there are very few who have never been employed in their lives. People get employment and they abuse the opportunities that they get in this ward.”

D2 suggest that most of the people in the ward have, at some stage, been employed, but as a result of their conduct they have had their employment terminated.

“Through the Expanded Public Works Program (EPWP) and the projects that are in this ward, they are not so many, you employ the people, and they abuse the opportunity. Come the end of the month when people get paid, they get drunk, and they don’t wake up and go to work.”

The EPWP is a programme by the National department of Public Works and was introduced to provide poverty and income relief through providing temporary work for the unemployed, through carrying out socially useful activities. D2 further reiterates this issue of the people taking for granted the opportunity of work that they

receive through the liaison of D2 and the employer for a specific project or socially useful activity.

“We involve them in community development programs so that they will be able to do something of their own, and not just sit around. Starting their own business, we assist them with that as well, and the establishment of it. Some of our programs aim to reignite their passion, so that they can have the required change of heart.”—D4.

Provision of community development programmes through the use of workshops and trainings is a useful initiative because people are inspired to become what they want to become, while they are also given a path to follow.

The findings underline the necessity of integrating socio-behavioural interventions into employment programs like the EPWP. Simply providing jobs is insufficient if individuals are not prepared to make the most of these opportunities. This highlights the need for community-based support systems that address underlying issues, such as substance abuse, personal development, and accountability, to complement employment programs. Moreover, the community development programs discussed by D4, which focus on entrepreneurship and self-reliance, offer a promising model that could be applied beyond Ward 12. By empowering individuals to take charge of their economic futures and providing them with the skills and resources to start their own businesses, such programs contribute to long-term sustainable development. This approach could be replicated in other municipalities facing similar challenges to address the root causes of unemployment and create resilient local economies that are less dependent on public works programs.

4.2.3. The nature of complaints that are frequent in the area of study

D1 provides the common complaints as,

“Housebreaking, theft, assault, common robberies. To an extent house robbery, armed robberies and to a lesser extent, theft out of motor vehicles.”

From a criminal activities point of view, it is identified that the crimes in this area are spurred by the abuse substances and the unemployment. D2 provides also provides the frequent complaints from the community as,

“Electricity and water, not necessarily because we do not have a supply of those things. With electricity we are not buying from the main supplier, which is Eskom, we are buying from the municipality. And then, administratively we are not being helped, once there is a problem with Eskom it is no longer within the jurisdiction of the municipality, they just take a step back. So, it means that as customers of the municipality no one comes forth and tells us where the problem is, we ask the municipality, and they say they don’t know because it is not in their jurisdiction.”

In this regard, the municipality buys the electricity from Eskom, and they then provide it to the households. There have been talks of changing this system to one where each household is supplied directly by Eskom, but it has not been seen through yet. This practice is not only more costly for the end-consumer, but it is also inconvenient. The inconvenience is caused by the fact that when there are issues with the inadequately maintained municipal infrastructure, the end-consumers have their electricity cut-off, and the same applies when the problem lies within the control of

the main supplier. D2 also provides complaints similar to those provided by D1,

“We also have a problem with ‘amaphara’, because I get calls where people are reporting their stolen fridges and other electrical appliances such as TV sets, laptops, and other appliances, as a result of house breaking.”

Emphasis is made on house breaking and the theft of electrical appliances; these are sold to willing buyers, some of which are the ones who send these vulnerable addicts to steal appliances for a quick fix. The word ‘amaphara’ used by D2 is a popular word amongst the South African black population, and originates from the English word parasite, which is an organism that lives in or on its host and benefits by deriving nutrients from its host. This is what the perpetrators do for a living, through stealing people’s property.

The link between unemployment, substance abuse, and crime is a common issue across underdeveloped communities globally. These findings underline the importance of addressing the socio-economic conditions that contribute to criminal behaviour. This suggests that a multi-sectoral approach -combining employment opportunities, education, addiction rehabilitation programs, and stronger community engagement—is essential for reducing crime rates in similar contexts. The inefficiencies in electricity supply in Ward 12 point to broader challenges in how local municipalities manage and deliver essential services. Many municipalities face issues with outdated or poorly maintained infrastructure, leading to service interruptions and increased costs for residents. This calls for a national dialogue on decentralizing service delivery in a way that empowers municipalities to resolve local issues more effectively or streamlines service provision directly to consumers. The findings also emphasize the need for greater community participation in local governance. D2’s observation that the community is passive and disconnected from planning and decision-making processes suggests that there is a lack of trust in local authorities. Strengthening public participation and improving communication between the municipality and its residents could enhance social cohesion and ensure that the community’s needs and concerns are addressed more effectively (Sibiya and Brent, 2019).

4.2.4. The involvement of the residents in the planning and decision-making process

“We have got community policing, and we also have social crime prevention. Social crime deals with the community in general. The community policing forum deals with schools, mainly. It is where we get to hear about the problems that the people are facing, and then we tell them what we have in place and also hear from them on what they would want us to do for them. For instance, schools complain about drugs, kids carry drugs to school, so we get involved.” D1: The CPF involves the residents and the interaction thereof, because we want to avoid the trend where children will see criminals as their role models.”

The community policing forum and the social crime prevention seems to foster a relationship between the police and the community, a relationship of communication, where one entity opens up to the other. The involvement of police officers in schools is a very positive thing. In Gauteng, Johannesburg, there have been several cases where high school students have been killing each other on school premises as a result of

gang related wars. The involvement of police drives the youth away from this kind of lifestyle, and it keeps them away from seeing a life of crime as a possible option. D2 mentions some of the challenges,

“The decisions are taken by the ward committee and me, because sometimes we have to drive them to a decision and then claim it as theirs, because we see that we will never get anywhere here. However, a very important issue is that professionals do not attend our community meetings. We have capacity, but it is not availing itself to be a part of the planning and decision-making on things that would propel this community forward.”

D2 mentions that the community members do not want to involve themselves in community meetings and that at times, the ward committee takes the decisions on behalf of the community because the members of the community do attend meetings. D2 further mentions that the issue of community member who have professional occupations not attending meeting. These people have a lot they could contribute to the meetings, some of which would be aligned to their professions and play huge role in taking the community forward, but they choose not to involve themselves. However, there are a few individuals from the community that are always in attendance of these meetings. D4 mentions the methods of community involvement they use,

“We involve the community by going to them first before implementing any of the programs. We have war rooms and community meetings which make sure that the community is gathered together, and then we discuss, and then implement. In a war room, there are different stake holders, and they attack individual cases within the community.”

D4 explains the concept of a war room as a committee that deals with a certain type of problem within the community. These committees are established in partnership with the SAPS and other service providers. They deal with issues head on and on a personal basis. The CCGs play a very crucial role in this regard, as they bring to light areas for concern. They bring forth the cases that may need intervention of war rooms or social workers; this is because of their interactive and invested relationship with the community. For better representation, the issues causing social instability in ward 12 can be represented by **Figure 4** below:

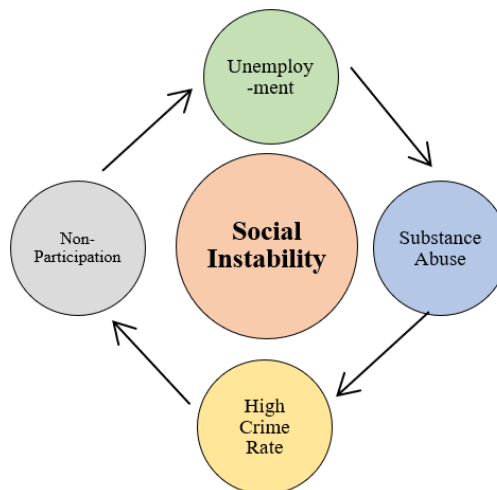


Figure 4. The uMlalazi social instability cycle.

Source: author’s construction.

As much as unemployment can be seen as the beginning of this cycle, but any issue in this instability can be brought up by any of the presented components. In the context of uMlalazi municipality, fostering social stability hinges upon several critical initiatives as indicated in **Figure 5** below. Job creation initiatives not only alleviate unemployment but also empower individuals economically, reducing financial stressors that can contribute to social unrest. Effective substance regulation and monitoring are imperative to curb substance abuse issues that often correlate with crime and social instability. Crime prevention initiatives bolster community safety, instilling confidence and cohesion among residents. Lastly, robust community engagement initiatives encourage active participation in local affairs, fostering a sense of belonging and collective responsibility. Together, these efforts are essential for promoting social stability in uMlalazi municipality, creating a safer and more cohesive community where residents can thrive.

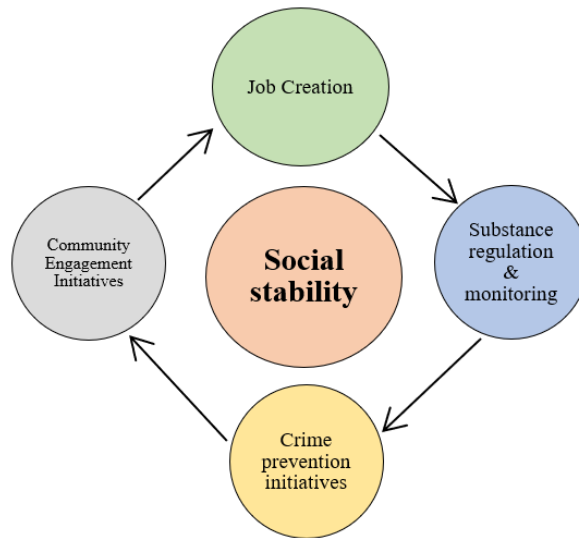


Figure 5. uMlalazi social stability cycle.

Source: author's construction.

4.2.5. Implementation of health awareness programmes to combat epidemics like HIV/AIDS

“We have NGOs who have outreach programs within the ward and amongst them is Shine SA, Doctors without borders and Childcare SA. Initially, they asked for permission each time they wanted to run one of their programs but now we signed an agreement with them. They can utilize any space in this area and set up their stations and work. They go out and loud hail to give the public notice. They are always here, and the people seldom come.”—D2.

D2 provides the way in which they go about spreading awareness in the community, D2 explains how the community has allowed the organisations that they work with to operate without any restraint. This is positive, as it maximises the impact of their efforts. The reduced channels to follow mean these organisations have more time and propensity to spread awareness and service the community. However, it is noted that people are not taking full advantage of this opportunity. Lack of community involvement has caused a culture of passiveness amongst the inhabitants of the study area.

While the presence of NGOs in Ward 12 offers a positive opportunity for community development, the lack of engagement from local residents limits the full impact of these efforts. Addressing the underlying causes of passivity and disengagement is critical not only for Ward 12 but also for similar communities where external resources are available but underutilized. These findings contribute to the broader discussion on the need for community-driven development, where local populations are active participants in shaping their own futures, working in partnership with both government and non-governmental actors.

4.3. Environmental sustainability

Developing countries often struggle with environmental management, particularly solid waste management. To assess this issue, researchers planned to ask the ward councillor and the Environmental Manager about waste management practices.

4.3.1. A description of the state of the environmental management system of uMlalazi local municipality

“Our environmental management system is not up to standard, I have to tell you, not up to standard. Maybe, sometimes they lack resources as a municipality, and we are not helping the ward 12. We have sixteen dumping areas and all of them are full of heaps of waste.”—D2.

D2 offers a description of the environmental management system in the study area. It is clear that their challenges in the ward with regard to the managements of solid waste. D2 apportions the blame between the local authority and the community. The community is said to not be playing its part adequately and as a result causing stress to an already compromised system. D5 offers a macro description of the system that narrows down into the study area; D5 provides that,

“We are a large municipality in terms of geographical characteristics, one of the biggest local municipalities in the country. Within our boundaries we have environmentally significant sites...”—D5.

The collection and transportation of solid waste is said to be outsourced to private entities in the area of study. The cleaning of the street in the area and the organising of the solid waste, upon its collection from the 16 provided dumping zones, is performed by the beneficiaries of the EPWP.

These findings underscore the interconnectedness of local governance, community engagement, and sustainable practices. They reflect a common challenge faced by municipalities across South Africa and many developing regions. By addressing these challenges, stakeholders can develop strategies that not only improve the local context but also contribute to broader initiatives aimed at enhancing environmental sustainability and public health across multiple municipalities.

4.3.2 The categorization and quantification of the solid waste collected

“We have two types of plastic bags, orange and black plastic bags. In the black plastic bags, we only put general waste, any sort of waste. In orange plastic bags we put only recyclable materials and re-usable materials only.”—D5.

D5 provides the methods for the categorisation and quantification of waste as the following. This arrangement is in line with the provision made in section 22 of the

National Environmental Management Waste Act No. 59 of 2008. It provides that anyone who generates waste that is collected by the municipality must both store the waste in a container and place it in a location that has been provided or designated or approved by the municipality, and that waste that is to be re-used, recycled, or reduced is to be placed in a container provided as aforementioned. The systematic categorization of waste into recyclable and non-recyclable materials not only enhances local recycling efforts but also aligns with national legislation aimed at promoting sustainable waste management (Oelofse et al., 2014). By adopting similar strategies, other municipalities can improve their waste management systems, foster community engagement in recycling initiatives, and ultimately contribute to national and global sustainability goals. This model serves as an exemplar for other regions seeking to enhance their environmental management frameworks and reduce waste-related challenges.

4.3.3. The allowance for the reutilisation and recycling of solid waste

“We have a number of local recyclers. We are mandated by the National Environmental Management Waste Act No. 59 of 2008 (NEMWA) to assist local recyclers.”—D5.

D5 highlights the presence of several local recyclers within the community and underscores the municipality’s obligation to support these recyclers in accordance with the National Environmental Management Waste Act No. 59 of 2008 (NEMWA). Specifically, Section 24 of the Act stipulates that waste collection within the community can only be conducted by the municipality or a designated municipal service provider. In this context, the local authority has empowered recyclers by facilitating their engagement with schools and retailers, supplying them with containers for waste collection, and granting them complimentary access to the waste transfer station. This initiative not only fosters local recycling efforts but also contributes positively to the economic and social dimensions of sustainability by generating employment opportunities for residents within the study area. These findings contribute to a broader understanding of how legislative frameworks can effectively bolster local recycling initiatives, serving as a model for other municipalities facing similar challenges.

4.3.4. The challenges regarding environmental management faced in the area of study

“Firstly, let me start by saying it is not a challenge of ward 12 only, but all municipal wards, the issue of illegal dumping sites... What contributes significantly to this issue, is the fact that people fail to comply with the collection schedule.”—D5.

D5 provides that this challenge faced with regard to people not placing the waste in the area of collection on the day of collection, is not one which is unique to ward 12, but it is an issue that is widely spread all over the municipal area. D2 also adds:

“We cannot educate people at home; they have to come to the meetings... Even those who come to the meetings do not practice what we preach.”

D2 provides that the reason for solid waste collection issue is caused by the fact that the community does not attend the community meetings. This is where most of the arrangements are decided on and disseminated to the people of the area. If a certain

household fails to put out the refuse so it is collected on the day and time of collection, it would be an impractical exercise for the collector to return for the refuse of that single household. If the household does not realise that the solid waste needs to be returned inside, it stands a chance of being spread all over the streets by dogs in the neighbourhood. D2 emphasises the point of providing written notice regarding the arrangements of solid waste disposal, but they are still not met.

4.3.5. Education of the residents of ward 12 on the appropriate handling of solid waste

“I think we still have a challenge on awareness programs....”—D5.

Here we uncover that the municipality’s environmental management department has went to the lengths of appointing an intern to spread awareness on the management of solid waste, in the area of study. Community structures meetings and the war rooms are some of the channels which are utilised to further communicate these arrangements. However, the means that have been mentioned above cannot fully accommodate people who do not participate in the activities of the community, which is why they have further resorted to the use of some pamphlets and notices on the appropriate management of waste collection of waste respectively. D2 responds,

“We can loud hail, we can give them notices, we can even call them to the meetings, in each and every meeting that we have quarterly we have a municipal official explaining the environmental management.”

Basically, D2 is emphatic on the community’s unwillingness to participate and cooperate. There are community meetings that are held quarterly and at each meeting, there are municipal officials present to explain to the community arrangements that have been employed to advance environmental sustainability. Furthermore, attempts to invite the residents to the meetings, educate them on the management of waste and disseminate the collection schedule, through means of loud hailing and written notices have not yielded and fruitful results. (See **Figure 6**)



Figure 6. The uMlalazi environmental cycle.

Source: author’s construction.

5. Conclusion

The study provides valuable insights into the effectiveness of the integration of the triple bottom line principles in the development and management of Ward 12 within the uMlalazi Local Municipality. It is evident that the municipality has made considerable strides in embedding economic, environmental, and social sustainability into its local governance framework. However, the extent and impact of these efforts vary across different domains.

The findings indicate that uMlalazi Local Municipality has partially succeeded in incorporating the triple bottom line approach in Ward 12. Economic initiatives have shown moderate success through job creation and support for local businesses, while environmental measures have seen mixed results, particularly in waste management and conservation efforts. Socially, there has been notable progress in community engagement and improved access to basic services. The key outcomes in Ward 12 reflect a blend of successes and ongoing challenges. Economically, there has been a slight uplift in local livelihoods and small business growth. Environmentally, environmental management system is not up to standard. Socially, enhanced community programs and improved infrastructure have bolstered social cohesion and quality of life. The research identifies several challenges, including limited financial resources, inadequate infrastructure, and the need for more robust environmental policies. Additionally, there is a need for greater community involvement and better coordination among stakeholders. Despite these challenges, significant opportunities exist in leveraging local resources, fostering public-private partnerships, and enhancing policy frameworks to achieve sustainable development.

Wider significance of the uMlalazi case study is on its very environmental conditions and form of urbanization that is viewed as peri-urbanisation. Peri-urbanisation is a phenomenon that is prevalent in many cities and towns that embody both urban and rural environments. This phenomenon is particularly prominent in intermediate cities in South Africa, Africa and rest of the world. However, the West and European countries have a different form of rurality in spaces they regard as countryside with focus on agricultural, mining and forestry development activities

In conclusion, while uMlalazi Local Municipality has made meaningful progress towards integrating the principles of the triple bottom line in Ward 12, there remains substantial work to be done. Addressing the identified challenges and capitalizing on the opportunities will be crucial for the municipality to fully realize its sustainable development goals. Continued commitment, innovative approaches, and active participation from all stakeholders will be essential in driving forward sustainable and inclusive growth in the region.

5.1. Limitations and recommendations

The study's reliance on only five respondents significantly limits the generalizability of the findings. A small sample may not adequately represent the diverse perspectives and experiences of the broader community within Ward 12. Future research should aim for a larger and more representative sample size to better capture the diverse perspectives and experiences within Ward 12. Employing a mixed-methods approach that combines qualitative and quantitative research techniques

could provide a more comprehensive understanding of the effectiveness of triple bottom line integration. In addition, conducting longitudinal studies would allow researchers to track changes over time in the implementation of sustainability initiatives and their impacts on the community.

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