

Leapfrog Developments – Gaps, Challenges and Opportunities in Urban Development: Cases of Harare and Durban

LOVEMORE CHIPUNGU¹, JOSEPH KAMUZHANJE², ELIZABETH D MAKONESE³,
HOPE H MAGIDIMISHA-CHIPUNGU⁴

Abstract

In 2000, the Government of Zimbabwe embarked on land reform and land redistribution programme, popularly known as the “Fast Track”. The programme was meant to correct the inequalities and inequities in land ownership between the minority whites and the majority blacks, and targeted agricultural land. At the same time, the Government decided to address urban growth and expansion by deliberately allocating some of the acquired farms for urban development. This noble idea resulted in the “mushrooming” of settlements in an almost unplanned fashion. Most of these settlements were divorced from the master and local plans of most urban centres and, therefore, lacked the necessary infrastructure such as water, roads and sewerage systems and key social services such as schools, clinics and waste management disposal systems did not exist. Over 20 years later, the situation has barely improved, and the outbreaks of diseases and pandemics such as cholera and typhoid are testimony to this. The article, focusing on the Harare Metropolitan Province and surrounding rural and urban local authorities and the City of Durban in South Africa, seeks to investigate whether the land

¹University of KwaZulu-Natal: SoBEDs

²Cooper Zimbabwe

³Commonwealth Local Government Forum

⁴University of KwaZulu-Natal: SoBEDs

reform programme is the only reason for leapfrog developments that have characterised urban environments. The article relies heavily on secondary data but makes use of primary data obtained through discussions with relevant planning authorities. The article argues that while the land reform programme played a key role, it is one of many factors for these developments that have taken place in an uncontrolled manner.

Keywords: leapfrog development, land reform, urban growth and urban development, planning frameworks

INTRODUCTION

The concept of leapfrog development has increasingly gained credence over the past few years due to several factors, chief of which is the high rate of urbanisation. According to Barnes and Morgan (2002; Barnes, *et al.*, 2015), leapfrog development sprawl is a discontinuous pattern of urbanisation, with patches of developed lands that are widely separated from each other and the boundaries, albeit blurred in some cases, of recognised urbanised areas. Leapfrog development occurs when developers build new residences some distance from an existing urban area, bypassing vacant parcels located closer to the city (Noor, *et al.*, 2014). This form of development requires the “greatest capital expenditures...to provide total urban services at the time of development” (Harvey and Clark 1971:476). The consequence of leapfrog development in urban areas is disjointed developments that sometimes negate proper planning principles. There are many reasons to explain leapfrog development. One is the ever-increasing rate of urbanisation. The new millennium has ushered in unprecedented levels of urbanisation in most countries in Sub-Saharan Africa. Between 1990 and 2015, the rate of urbanisation has increased from 33.9% to 57.1% and is projected to continue increasing as rural poverty continues to manifest itself. Urbanisation brings with it massive pressure in terms of service provision in the form of jobs, housing and other social infrastructure, and physical infrastructures such as roads and electricity. While the normal planning in urban areas has always prioritised open spaces as a way of making the cities and towns “breathe”, this is not necessarily the case with leapfrog

developments that have been witnessed over time, that have been largely unplanned and generally haphazard in their location. While there are opportunities for the containment of urban sprawl through densification (Chipungu, *et al.*, 2018), very little of this has happened due to cultural and social reasons. Urban areas have expanded horizontally rather than vertically.

In the case of Zimbabwe, for example, most of the leapfrog development that has been seen, especially in Harare, has been as a result of the Fast Track Land Reform Programme (FTLRP), which was initiated by the Government in 2000. Most of the land that was acquired lay on the periphery of urban centres. These peri-urban areas were not only far from existing developments but fell in what could be termed “no man’s land”. This was because these areas were on the border between city and rural district council boundaries. In most cases, they had not been acquired for urban development, so urban local authorities were not keen to invest in the provision of infrastructure and other utilities. At the same time, the rural local authorities were well aware that, eventually, the land would be acquired for urban development and were not prepared to invest in infrastructure development for land that would eventually be taken away from their control. The housing developments that came up as a result of the FTLRP were, therefore, not adequately serviced because they were too far from any existing development and infrastructure. This issue has dogged these settlements up to now, 20 years after they were established.

In South Africa, the apartheid era entrenched racial divisions, as a result of the Group Areas Act (Act No. 41 of 1950 and 1957) and “urban residents were further separated into racially designated settlement areas” (Hall, 2011; Davenport, 1978:119 cited in Lombard, 1996:5). Kekis (2008:39) expanded further, stating that the Act “forced physical separation amongst races through creating different residential areas for different racial groups such as blacks, Indians, coloureds and whites”. The implementation of the Act, which began in 1954, led to the forced removal of people living in so-called ‘wrong areas’ and the wholesale destruction of communities, especially black communities (Hall, 2011; Davenport, 1978:119 cited in Lombard, 1996).

THE LINK BETWEEN LEAPFROG DEVELOPMENT AND URBAN SPRAWL

Sprawl development consists of three basic spatial forms: low-density continuous sprawl, ribbon sprawl and leapfrog development sprawl (Harvey and Clark, 1971). Urban sprawl is a fundamental theme in the sustainability debate (Zhao *et al.*, 2011) and literature often equate sprawl with unsustainability (Le Néchet, 2012). However, what is unsustainable about urban sprawl is its wasteful forms, so that future generations can be deprived because of dwindling resources used to make way for urban expansion (Gerundo & Grimaldi, 2011). Leapfrog development is a type and form of urban sprawl (Owusu, 2012). There is consensus that urban sprawl is primarily characterised by three attributes, namely leapfrog and scattered development, commercial strip development and large expanses of low-density or single-use development (Frenkel & Ashkenazi, 2008; Sayas, 2006; Sims & Mesev, 2011; Tsai, 2005).

DRIVERS OF LEAPFROG DEVELOPMENT

Leapfrog development sprawl is caused by various factors. Physical geography such as rugged terrain, wetlands, mineral lands, or water bodies may preclude continuous development or make it prohibitively expensive. Other factors encouraging leapfrog sprawl are not necessarily physical: restrictive land-use policies in one political jurisdiction may lead development to “jump” to one that is favourably disposed toward development or is less able to prevent or control it. Some have posited that urban sprawl represents a natural growth phenomenon (Jaret *et al.*, 2009). In other words, since cities represent the hub of economic activities and populations, there is a natural tendency for the outward expansion of cities (Owusu, 2012). Economists identify three underlying forces that interact with land values to create spatial urban expansion or sprawl. First, population growth results in the outward expansion of urban areas (sometimes population decline can be a precursor to sprawl). Second, rising incomes allow residents to purchase larger living spaces. These residents locate where housing options are less expensive, in suburban and ex-urban areas generally located on the outskirts of metropolitan areas (Carruthers & Ulfarsson, 2002). Third, decreasing commuting costs produced by historical investments in transportation

infrastructure fuel the outward expansion of development (Brueckner, 2000). Infrastructure drives the growth of cities by providing the essential framework for residential development.

Flight from blight has been put forward as another important theory for the increased sprawl of cities. This theory proposes that greater decentralisation of urban areas is, in part, driven by the repellent factors of higher tax rates, higher crime rates, crumbling infrastructures, low-performing public schools, and a greater presence of the poor and lower class in central or inner-city neighbourhoods (Wasserman, 2008). Wasserman (*ibid.*) adds that the flight from blight explanation looks beyond the natural forces (as accounting for the increased footprint of an urban area and decreased population density) and seeks a further explanation for urban decentralisation based upon the desire to avoid the real and perceived blight of more centralised locations of cities.

In cities of the developing world with weak land markets and urban governance systems, land speculation is rife. This leads to a situation where developers who need land for housing and other productive activities, must find land far away from the city centre and the urban built-up area – a process sometimes referred to as peri-urbanisation. According to the UNFPA (2007), peri-urbanisation is fuelled partly by land speculators who, nurtured by the prospect of rapid urban growth, hold on to land in and around the city, expecting land values to increase. This allows cities to expand their footprints and reduce their densities, and sprawl while empty plots of land remain in inner-city areas.

METHODOLOGY

In a bid to present authentic and comprehensive data, both qualitative and quantitative research tools were used to gather information in Harare and Durban. The methodology was largely divided into two groups – secondary data sources and primary data sources. These secondary data sources were obtained from a variety of sources including books, journals, internet sources, special government publications and development plans for the municipalities from project managers involved in housing

developments. Primary data sources included interviews, household surveys, key informants and observations during focus group discussions.

HOUSING AND LEAPFROG DEVELOPMENT IN HARARE

LEAPFROG DEVELOPMENT IN HARARE – A HISTORICAL RETREAT

Urbanisation, defined as “the proportion of a country’s population living in urban settlements,” has been an increasing trend in developing countries, especially since the 1950s. Africa has witnessed “runaway urbanisation,” which has created immense gaps between citizen demand for services and the supply of infrastructure, including housing. Potts (1997) suggests that urbanisation activates certain kinds of development, including population and civic participation in matters that affect the inhabitants of the city on a day-to-day basis. The National Housing Policy Zimbabwe (2010) Post-1980 argues that urbanisation was shaped by a combination of ‘rural push’ and ‘urban pull’ factors. The repeal of some of the race-based urban governance policies and practices spurred rural-urban migration and inter-city population movements. In terms of urbanisation, Zimbabwe was 25.2% urban in 1985, 28.4% in 1990, 31.8% in 1995 and 35.3% in 2000.

In Zimbabwe, rapid urbanisation was not matched by an increase in service provision and infrastructure development. This led to the development of squatter settlements, made up of plastic and metal shacks, especially in the high-density areas of Mbare and Epworth, in Harare. People who were living in these squatter camps did not have safe drinking water and a healthy sewer system. These camps were later demolished during *Operation Murambatsvina* (no to dirt!) of 2005. This operation affected an estimated 700 000 people, who lost their homes or their livelihoods (Tibaijuka, 2005; Muchadenyika, 2015; Olaleye and Tungwarara, 2005). The affected were later relocated to the outskirts of Harare, settling in the peri-urban farm of Caledonia, Hatcliffe, Hopely and Epworth. However, these settlements lack basic services such as water, sewer systems, proper roads and social amenities (Chitekwe-Biti, 2009; Muchadenyika, 2015). The peri-urban areas were originally designated for urban agriculture and were affected by urban sprawl.

Numerous unplanned settlements have since sprouted due to an increased demand for urban housing. This increases pressure on resources (Muchadenyika, 2015), since the Harare City Council provides services like water supply to the dormitory towns like Chitungwiza and Ruwa. There has been notable urban development around Harare, particularly in the peri-urban but with inadequate urban amenities. Rural district councils in Zimbabwe own and control most of the land around major cities, for example Zvimba, Goromonzi and Manyame Rural District Councils own land around Harare and Umguza Rural District Council owns land around Bulawayo (Chigudu 2021). Consequently, major cities are limited in terms of urban development and expansion due to boundaries.

HOUSING AND RACIAL SEGREGATION

At independence in 1980, the Zimbabwean government inherited, though with minor adjustments to suit new policy orientations, an urban planning system that was drawn along racial lines (Chigara *et al.*, 2013). Whites lived in well-developed areas, with houses built and financed by the private sector, while blacks lived in areas with most public sector housing (Moyo, 2014). Both the public and the private sectors can, therefore, be said to have contributed to the provision of housing in the country before and after independence. Drakakis-Smith (2000) states that during the colonial era, blacks were allowed in the urban areas only temporarily and this was enforced legally through the Land Apportionment Act (Number 30 of 1930) that divided the country into African (black) and European (White) areas. Blacks were obliged by circumstances to come to town only to work and then later retire to their rural homes. Indeed, the Urban Areas Accommodation and Registration Act (Number 6 of 1946) stipulated that only employed blacks could be allowed in towns and cities. This Act allowed local authorities to set aside urban locations for working Africans and required that employers accommodate their workers within their premises (Musekiwa, 1995).

At independence in 1980, the new government, led by Robert Mugabe, removed restrictions on internal migration, resulting in a large influx of people from rural areas into the cities. The population of Harare nearly

doubled in size from 650,000 in 1982 to 1,200,000 ten years later (Rakodi, 1995), putting considerable strain on the city's infrastructure and exacerbating the existing housing shortage (Colquhoun, 1993). Nevertheless, the early 1980s were marked by popular optimism as the economy flourished and the government promised affordable housing for everyone by the year 2000 (Mlambo, 2008). The emphasis was put on homeownership and self-help projects such as site-and-service and rent-to-buy schemes. Under that, the government provided serviced plots with basic housing units. Land titles were subsequently transferred to occupants on fulfilment of conditions such as regular rent payments and completion of the full house within a given timeframe. The self-help approach lowered government's costs and was perceived as a cheaper alternative for those who could not afford conventional housing (Musekiwa, 1993).

LAND AND HOUSING IN SOUTH AFRICA - A HISTORICAL RETREAT

Housing development in South Africa in the 19th and 20th centuries tended to be diverse, largely shaped by each town's local economy, while the emphasis remained on compound-type accommodation (Maylam, 1990). The focus was to grow cheap labour through the development of housing compounds that evolved as not only centres for labourers, but as mechanisms for development control. There was no developed policy or system for housing the urban black population before 1920, apart from the compound housing for workers at the mines, docks, factories, harbours, and commercial businesses (*ibid.*). Townships established in all towns (such as Kliptown, South Western Native Townships (Soweto), Sophiatown, Martindale, Eastern Native Township, Newclare and Alexandra), accommodated only a small proportion of blacks who lived outside the compounds, with the rest living in private leasehold or freehold townships or rented backyard quarters in the central areas of towns (*ibid.*). Wilkinson (1998) makes an interesting observation into the developments of the time by noting that in the 1920s.

It is interesting to note that there was no proper housing policy in the early years. Instead, development was shaped strictly by segregation laws such as the "Stallard Principle". This is substantiated by Christopher

(1994:38, cited in O'Malley, 2005) who observed that emerging housing estates were supposed to be racially segregated and physically separated from one another by open spaces and separate access roads. The National Party that came into power in 1948 further reinforced these laws with a focus on public rental housing and hostel accommodation in dormitory townships (Lombard, 1996). This did not only entrench segregation, but also categorically removed freehold rights and free movement of blacks in urban areas. In principle, separate development recommended in the Urban Areas Act of 1923 was made mandatory through the Group Areas Act No. 41 of 1950 (Morris, 1981:69, cited in Maylam, 1990:69).

Hence the control of the black urban population through eliminating surplus “natives” by sending them to reserves or Bantustans (Department of Native Affairs, 1951: II, cited in Wilkinson, 1998:219) became the norm. All black spots in urban areas where natives were considered to be unproductive and, therefore, a burden, were targeted. Some were relegated to the urban periphery in what was dubbed “regional planning”, yet it was to create townships that would serve as labour pools for adjoining urban areas. It is, therefore, not surprising that at the dawn of democracy in 1994 in South Africa, millions of blacks were already residing on the periphery of cities since core urban areas were not meant for them.

It is from this historical overview that leapfrog developments should be understood as “mishaps” of human creations that emerged out of selfish motives meant to undermine the integrity of certain racial groupings. Indeed, the continual perpetuation of such developments further serves as a reminder to us about the catastrophic impact and long-term effects legislative and developmental interventions can have spatially.

CONTRIBUTION TO LEAPFROG DEVELOPMENT

Chipungu and Magidimisha-Chipungu. (2021) argue that the onset of the Fast-Track Land Reform Programme (FTLRP) in 2000 witnessed a gradual decline in the rate of urbanisation, while economic growth was affected. By 2010, the Gross Domestic Product (GDP) had shrunk by 17%, while inflation was estimated at 231 million percent, with the

Zimbabwean dollar trading at four million to the United States dollar (Globalisation and Monetary Policy Institute, 2011). However, it is interesting to note that the FTLRP, though perceived as agrarian in nature initially, provided yet another opportunity for the low-income people's *right to the city* through access to land for housing (Chipungu and Magidimisha-Chipungu, 2021). Indeed, this was a phenomenon at that stage in the history of city building in Zimbabwe that transformed the urban areas' residential landscape as housing production, through informal channels and cooperatives, offered the urban poor a chance to access and build a "home" in urban areas. It is from this perspective that it is argued here that the FTLRP provided yet another platform for spatial justice for the urban poor who, to some extent, were able to exercise their rights to access land and build housing in urban areas, thereby contributing to leapfrog development.

EXPLORING DRIVERS OF LEAPFROG DEVELOPMENT IN HARARE AND DURBAN

THE INSTITUTIONAL FRAMEWORK

The institutional framework for the built environment, especially in most cities, plays a pivotal role in directing and facilitating development, both legally and illegally. The legalistic perspectives emphasize the need to achieve formal built environments governed by aspects of functionality and sustainability, among other factors. From a pure town planning perspective, the need to achieve public interests takes centre stage. Housing, which in principle is the major contributor to the urban footprint, is governed by a multiplicity of policies, legislations and guidelines that directly or indirectly contribute towards leapfrog development.

In the Zimbabwean scenario, among the various policy factors that contribute to urban sprawl is the self-help approach. The self-help approach to housing production among low-income households in Harare, is one of the factors contributing to urban sprawl. Its appropriateness in the cash-strapped Zimbabwean economy, has been emphasized in various policy documents. Many authors (Keivani *et al.*,

2004; Turner, 1976) have observed that this mode of housing production is highly individualised and incremental since it depends on households' capacity to mobilise resources. Individualism blends well with ownership of free-standing plots, thereby contributing to urban sprawl. Even where a cooperative takes the initiative to build core houses, these are limited to one-bedroomed structures that require additional investment by individual households to bring them to required standards. In addition, this mode of production is highly labour-intensive, with the use of local building materials supported by intermediate technology. In essence, it revolves around mechanisms that allow affordability through cost-cutting measures. Hence, most of the houses are simple structures that do not go beyond one-floor level.

Equally important is the question of urban sprawl is the issue of homeownership policy. The FTLRP was a means to achieve social justice, especially among the urban poor who were denied the right to the city through permanent residence. However, the home-ownership policy revolves around the parcelling of land into individual plots that require the construction of free-standing housing units. The situation has been aggravated by high development standards for both infrastructure and housing plots that further promote sprawl. While the Harare Combination Master Plan of 1992 acknowledges the need for densification in housing production, this is not the case in practice. For instance, in 2011 alone, 50 land surveys were undertaken that yielded 22 568 individual plots, while only 54 applications were made for cluster housing (HCC, 2011).

POOR LAND MANAGEMENT

The existence of large tracts of vacant land requires proper land management systems. However, existing evidence shows that land acquired through public acquisition means, is always prone to misuse due to a myriad of competing factors, among which are lax development control mechanisms, inadequate capacity from both central and local governments, corruption, redundant institutions, party politics and lack of concerted vision by authorities. All these factors have been witnessed in the Zimbabwe urban land question from the acquisition of land to current

development conflicts where issues escalate into legal confrontations. The case of land barons involving political party heavyweights and ordinary beneficiaries who were used as pawns during the land acquisition stages, highlights the extent to which land on the periphery was targeted by those in power to satisfy their selfish motives using ordinary citizens. Indeed, controversial housing cooperatives such as Ushewokunze and Whitecliff Housing Development are a good reminder of how to leapfrog development partially evolved out of such selfish motives.

THE COLONIAL LEGACY

The colonial legacy can be expressed simply as the need to achieve social justice through the right to the city. Those who were initially denied the right to the city through manipulative colonial and apartheid planning policies see democracy as the platform to access the city and benefit from various opportunities. Accessing such benefits is only possible through a housing development that spatially and strategically positions beneficiaries in specific locations within reach of such opportunities. Hence emerging housing developments on the city periphery is partly responsive to such forces. The mass movement that saw homeless people invading land in Harare (FTLRP) came out of the need to have a permanent residency in the city through having houses. This was a noble cause although largely driven by the politics of the day. Hence housing developments such as Nehanda and Ushewokunze, on the periphery of the city, came into existence on readily available land. On the other hand, the search to provide decent accommodation for people who are living in informal settlements saw the government building houses on land available on the periphery of the city. Driven by the vision of the Reconstruction and Development Programme (RDP) of 1994, the South African government committed itself to building housing units in a bid to provide decent living conditions to its citizens. While the motives were positive in both aspects, the spatial implications were negative as seen through urban sprawl.

LEAPFROG DEVELOPMENT AS AN EXPRESSION OF AUTHORITY

The question of governance and authority in urban management raises controversial issues whose tentacles go beyond formal administrative systems in place. What further complicates the whole equation is the issue of party politics that cannot be divorced from the running affairs of the city. But more so, the nature of conflict spills over into the sphere of traditional authority, especially on the urban periphery where the urban-rural divide is hazy. In the Zimbabwean scenario, the obscure line between the ruling party, the Zimbabwe African National Union-PF (ZANU-PF) and the government has seen much interference from central government into the local authority sphere. The culmination of this conflict was evidenced at the height of the FTLRP when Harare Province was formally created under the leadership of the government. Many critics argue that this was a strategic move to control the City of Harare and its resources. Indeed, it was during this period that “obstacles” to land acquisition and access to infrastructure around the city were removed (Chipungu and Magidimisha, 2021). The central government positioned itself as the owner of land with the right to “allocate it” and as the “developer” to build houses for the poor as seen through *Operation Garikai*. In the same vein, access to infrastructure such as water came under the control of the central government.

In the South African context, the power game in land acquisition and development manifests itself differently, informed largely by the need to be inclusive in development. Ownership of land and development in Durban has seen developments taking different dimensions and manifestations in different parts of the city. One such dimension is observable in Adams in the southern part of Durban, where power over land allocation is under the authority of the traditional leadership (*Inkosi* — King). This land falls under the jurisdiction of Ingonyama Trust where the *Inkosi* and the Traditional Council have the authority to allocate land through customary practices and social networks (Mbatha and Mchunu, 2016). The dilemma of these developments is that they do not have due

regard to the planning system since environmental issues and standards are not observed. However, residents in such areas are eligible for infrastructure provision by the Municipality. Access to most of these areas such as Adams is characterised by poorly self-constructed gravel roads. More so, beneficiaries are eligible for basic services such as water, sanitation, electricity and refuse removal as per the indigent policy. In this regard, power differentiations, coupled with prevailing policies in place, make it difficult for the municipality to control such unplanned leapfrog developments on the periphery of the city. An attempt to control and systematic such housing developments through the area-based management (ABM) approach has failed to tame the fragmented nature of such areas. If anything, it has complicated governance and strained its budgetary limitations in a bid to provide services.

PRICE OF LAND

Leapfrog development is a function of pricing mechanisms for land. In the case of Durban, finding a suitable and affordable vacant piece of land within urban restructuring zones near employment, economic opportunities, recreational areas and social services, is one of the biggest challenges low-income households face. In most cases, land that is suitable and affordable for housing development is located far from the CBD and, at times, outside the urban development line. Land available within urban restructuring zones is expensive and beyond the reach of the urban poor if acquired without government subsidies. An overview of land prices prevailing in Durban shows that a 1000m² piece of land in the Point area (Durban Waterfront – CBD) can cost up to R10 million, yet the same piece of land in Morningside (a mere 3km from the CBD, can cost up to an R1 million. while in Mayville (approximately 7km from the CBD) can cost R80 000 (Chipungu and Zungu, 2020). These prices are dictated by locational factors that unfortunately hit the poor hard and thwart government's efforts to acquire such land since it renders it uneconomical. It is under such circumstances that leapfrog developments emerge in response to prevailing prohibitive pricing mechanisms for land.

TOPOGRAPHICAL FEATURES

Leapfrog development has always been associated with the human dimension as the initial trigger of such developments to the total disregard for environmental issues that are equally catalysts in this process. So often the impact of the natural environment and how it contributes to leapfrog development is always ignored. Chipungu and Zungu (*ibid.*) make a critical observation on how topographical features contribute immensely to leapfrog development in Durban. Topographical features in Durban have forced some developments to be undertaken on the periphery of the city. Durban is characterised by steep slopes in the west and moderately flat seaside plains in the east (EM, 2011:12). Steep slopes are defined as land in its natural state that has a slope angle of 20% or more for a minimum horizontal distance of 10 metres (City of Nanaimo, 2005:7). Steep slopes are vulnerable to natural disasters, expensive to construct low-income housing on and expensive to maintain. The costs associated with the cut and fill, earthwork, retaining walls and erosion prevention, among others, are often prohibitive. The Municipality's 2012/13 integrated development programme (IDP) has observed that the topography of Durban incorporates 98km of coastline, 18 catchments, 16 estuaries and 4000 km of rivers (EM, 2012/13:21). Related to topographical issues is the fact that approximately 75 000 hectares of land in the Municipality fall under the Durban Management Open Space System (DMOSS) which is environmentally sensitive and is a habitat for various animal and plant species. Hence this land is protected by legislation and development is restricted. Should development occur in such areas, it is too expensive for low-income projects. Hence conducive topographic conditions in the south are characterised by a flattish coastal band carrying much of the current urban development and transportation corridors while an inland band of undulating topography accommodates a mix of township developments (EM, 2011b:13).

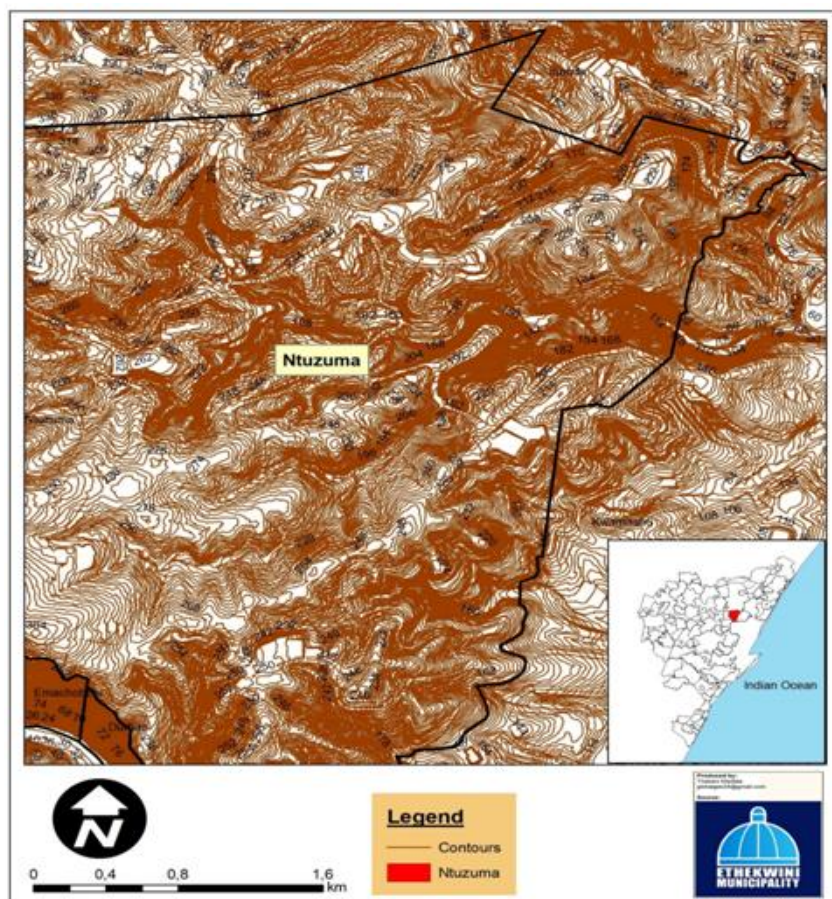


Figure 1: *The Topography of EThekweni Municipality* (EM, 2011b:13)

CONCLUSION AND RECOMMENDATIONS

What emerges from the discussion above is that leapfrog development is a function of human development in as much as it is an environmental phenomenon. As a function of human development, it has both positive and negative connotations. It is an endeavour to quench selfish motives (as expressed during the colonial and apartheid eras) whose focus was to eliminate other races from enjoying emerging urban centres while at the same time eliminating competition over space to achieve economic

monopoly. Unfortunately, spatial conflict (as seen in conflict over land) will continue raging on until sustainable solutions are achieved. The FTLRP is symbolical, a movement for the right to the city on a large scale that put its mark on leapfrog development. In essence, it is a culmination of concerted initiatives by small groups of people seen through land invasions and the creation of informal settlements in both Harare and Durban. However, it must be acknowledged that the physical environment has its share of challenges that contribute to leapfrog development. Hence the need to achieve a balance between spatial development needs and environmental sustainability has seen some developments being undertaken on the periphery of cities. This is inevitable given the impact of climate change most cities are experiencing.

In summary, how do we achieve sustainable development to minimise leapfrog development? There is no single model of spatial intervention to this question. Instead, whatever intervention modalities are to be implemented, they must be responsive to the contextual dynamics of each city. It is important to understand the socio-economic dynamics and developmental path lines as advocated in existing and future development plans. However, observable indicators of development point to the need to direct new developments towards existing developments to capitalise on existing and proposed social and physical infrastructure. Emphasis should be given to the co-production of urban space to avoid ad-hoc developments that are costly to regularise and align with planned development. It should always be remembered that the overall aim is to achieve sustainable spatial development that is inclusive of all human needs. Political expediency, while essential as a catalyst for human development, should be managed within the realms of planned development.

REFERENCES

- Barnes, K. B, Morgan III, J. M, Roberge, M. C. and Lowe, S. (2015). *Sprawl Development: Its Patterns, Consequences and Measurement* by Department of Geography and Environmental Planning 8000 York Road Baltimore, Maryland 21252-0001.

- Barnes, K.B, Morgan III, J.M, Roberge, M.C. and Lowe, S. (2002). *Sprawl Development: Its Patterns, Consequences, and Measurement*, Towson University, 8000 York Road, Baltimore, Maryland 21252-000
- Brody, S. D. (2008). *Ecosystem Planning in Florida: Solving Regional Problems through Local Decision-making*. Aldershot, UK: Ashgate Press.
- Brody, S. (2013) The Characteristics, Causes, and Consequences of Sprawling Development Patterns in the United States. *Nature Education Knowledge*, 4(5):2.
- Bruelckner, J. K. Urban (2000). Sprawl: Diagnosis and Remedies. *International Regional Science Review*, 23, 160-17.
- Buel, K. (1996). Land use planning: A farmer's perspective. In: Diamond H. L. and Noona P. F. (eds) *Land Use in America*, 237–243. Washington, D.C.: Island Press.
- Carruthers, J. I. & Ulfarsson, G. F. (2002). Fragmentation and Sprawl: Evidence from the Interregional Analysis. *Growth and Change*, 33, 312-340.
- Chigara, B, Magwaro-Ndiweni, L, Mudzengerere F.H. and Ncube, A.B. (2013). An Analysis of the Effects of Piecemeal Planning on Development of Urban Small Urban Centres in Zimbabwe: Case Study of Plumtree. *Journal of Sustainable Development in Africa*, 5(2): 27-40.
- Chigudu A (2021). The Changing Institutional and Legislative Planning Framework of Zambia and Zimbabwe: Nuances for Urban Development. *Land Use Policy*, 100.
- Chipungu, L. and Magidimisha-Chipungu, H.H., (2021). *Housing in the Aftermath of the Fast Track Land Reform Programme in Zimbabwe*. London and New York: Routledge.
- Chipungu, L. and Zungu, K. (2021). Revisiting Land Challenges in Housing Urban Poor People in Post-Apartheid South Africa. An Insight into Durban. In: Myeni, S.L and Okem A.E. (eds.): *The Political Economy of Government Subsidised Housing in South Africa*. London and New York: Routledge.

- Chirisa, I. (2013). Increased Squalor in Urban and Peri-urban Zimbabwe since 2009: Assessing the Rhetoric, Practices and Contradictions of the Government of National Unity. SPRJv2.1 (Special Issue with OSSREA Zimbabwe Chapter).
- Chitekwe-Biti, B. (2009). Struggles for Urban Land by the Zimbabwe Homeless People's Federation. *Environ. Urban.* 21(2), 347–366.
- Deborah, P. (1997). The Slowing of sub-Saharan Africa's Urbanisation: Evidence and Implications for Urban Livelihoods. *Urbanisation and Environment*, Volume 21 Number 1
- Drakakis-Smith, D. (2000). *Third World City*. London: Routledge.
- Doyle *et al.* (2001). Paving Paradise: Sprawl's Impact on Wildlife and Wild Places in California. A Smart Growth and Wildlife Campaign California white paper. San Diego, California: National Wildlife Federation.
- eThekweni Municipality. (2011). Preparation of Flood Lines.
- Furuseth, O. J and Pierce, J. T.. (1982). *Agricultural Land in an Urban Society*. Washington, D. C.: Association of American Geographers.
- Hall, R. · (2011). Land: A New Wave of Accumulation by Dispossession in Africa? *Review of African Political Economy*. 38(128).
- Harvey, R. O. and. Clark W. A. V. (1971). The Nature And Economics of Urban Sprawl. In: Bourne L. S. (ed). *Internal Structure of the City*. 475-482..New York: Oxford University Press.
- Jaret, C., Ghadge, R., Reid, L.W., Adelman, R.M. (2009). The Measurement of Suburban Sprawl, An Evaluation. *City & Community* 8(1), 65-84.
- Kamete, A., (2006). Revisiting the Urban Housing Crisis in Zimbabwe: Some Forgotten Dimensions? *Habitat International*, 30(4): 981-995.
- Lombard J.J.G. (1996). Housing Strategies and the Urban Poor in South Africa. A Brief Critical Evaluation. Working Paper No. 80.
- Moyo, W, (2014). Urban Housing Policy and its Implications on the Low-income Earners of a Harare Municipality, Zimbabwe, *International Journal of Asian Social Science*, 4(3): 356-365
- Mileti, D. S. (1999). *Disasters by Design*. Washington, D.C.: Joseph Henry Press.

- Mitchell, J. K. (1976). Adjustment to a New Physical Environment Beyond the Metropolitan Fringe. *Geographical Review* 66(1):18–31.
- Muchadenyika, D. & Williams, J.J. (2016).. Social Change: Urban Governance and Urbanisation in Zimbabwe. *Urban Forum*, 27(3), , 253-274)..
- Muchadenyika, D. (2015). Slum Upgrading and Inclusive Municipal Governance in Harare, Zimbabwe: New Perspective for the Urban Poor. *Habitat International* 48, Elsevier.
- Olaleye, W., Tungwarara, O. (2005). *An Analysis of the Demolitions in Zimbabwe*. Harare: Action- Aid International.
- Owusu, G. (2013). Coping with Urban Sprawl: A Critical Discussion of the Urban Containment Strategy in a Developing Country City, Accra, *The Journal of Urbanism* 2, 17.
- Maylam, P. (1990). The Rise And Decline of Urban Apartheid in South Africa. *African Affairs*, 89(354), 57-84.
- Musakwa, W., Van N (2014). Monitoring Urban Sprawl and Sustainable Urban Development Using the Moran Index: A Case Study of Stellenbosch, South Africa, *International Journal of Applied Geospatial Research*, 5(3), 1-20
- Mohd N, *et al.* (2014.) Measuring urban Sprawl nn Geospatial Indices Characterized by Leapfrog Development Using Remote Sensing and GIS Techniques, IOP Conference Series: *Earth and Environmental Science Volume 18*(1).
- Mohd Noor, N and Rosni N A. (2012b) Malaysia Institute of Planners Conference on Urban Planning and Management, Malaysia: Kuala Lumpur.
- Musekiwa, A. (1995). Low-income Housing Development in Harare, a Historical Perspective. In: Zinyama, L. (ed.), Harare: The Growth and Problems of the City. Harare: University of Zimbabwe Publications.
- Rakodi, C. (1995). Housing Finance for Low-Income Urban Households in Zimbabwe. *Housing Studies*, 10(2), 199-227.
- Tibaijuka, K.A. (2005). Report of the Fact-finding Mission to Zimbabwe to Assess the Scope and Impact of Operation Murambatsvina by the UN Special Envoy on Human Settlements Issues in Zimbabwe. United Nations, New York.

- UNFPA (2007). UNFPA State of World Population Report 2007: Unleashing the Potential of Urban Growth. New York: UNFPA.
- Wasserman, R. W. (2008) Causes of Urban Sprawl in the United States, Auto Reliance as Compared to Natural Evolution, Flight from Blight, and Local Revenue Reliance. *Journal of Policy Analysis and Management*.
- Wasserman, M. (2000). Urban Sprawl: American Cities just Keep Growing, Growing, and Growing, *Regional Review* 10. http://www.bos.frb.org/economic/nerr/rr2000/q1/wass00_1.htm; accessed in 2012.
- Wilkinson, A. (1998). Empowerment: theory and practice. *Personnel review*.
- ZimStats (2016). Facts and Figures 2015.