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Re-thinking Housing Infrastructure development approaches: Lessons from Zimbabwe

Abstract

Globally, housing provision has always been a mammoth task for all spheres governments; whether national, provincial or local as they struggle to meet the ever soaring demand. The situation has however been grimmer in African, Asian and South American continents that lack mostly financial resources and advanced low cost technologies. The majority of the urban poor have perpetually been excluded from most land and housing projects, that religiously follow the traditional planning-servicing-building-occupation (PSBO) frameworks. Most often than not, rigidities in housing development sequences condemn and compel the urban poor to rely on the occupation-building-planning-servicing (OBPS) frameworks that give informal settlements as outcomes. This paper discusses an innovative and less costly housing development framework, the planning-occupation-building-servicing (POBS) sequence that was adopted by the Zimbabwean government in almost all the urban centres of the country in 2005, just after Operation Murambatsvina. The data were gathered through interviews with key informants and housing plots allottees. Observations and photographic surveys of the housing structures and community infrastructure services that have so far been developed incrementally were also conducted. The findings revealed that the allocating unserviced but formally planned and surveyed housing sites to the urban poor considerably improves targeting of the urban poor and makes housing more affordable. Such schemes not only contribute to housing supply by providing orderly and standard houses but also assist in eliminating or massively reducing down-raiding of aided self-help housing schemes by the middle and high income people. The paper concludes by observing the critical need for governments of developing countries to innovatively solve housing problems of the urban poor by adjusting the currently rigid housing infrastructure provision sequences and to make them affordable and flexible.

Keywords: Housing infrastructure, unserviced housing sites, urban land delivery, low income households

1. Introduction

Soaring urbanisation is continuously exerting pressure particularly on governments of developing countries that are grappling with capacities to provide basic and sustainable human settlements for the urban poor (Aigbavboa & Thwala 2011; Hague 2007; Olotuah & Bobadoye 2009). More than half of the world's population now live in urban centres. However the majority of urbanites are found within developed countries. Developing countries are still lowly urbanised and as such they continue to experience rapid urbanisation. High urbanisation is also attributable to natural increase of population and spatial horizontal expansions of urban centres into surrounding rural areas as more people assimilated into the urban centres. This trend is common in the African continent where the majority of the people still live in rural areas. It has however been observed that the continent is urbanising rapidly as cities offer better opportunities in terms of income generation as well as health and educational services. Such developments have led to the proliferation of both income and housing poverty, a process now commonly known as the impoverishment of urban centres. However, it is housing poverty that clearly manifests itself in slums where millions of the world population live in substandard and inhuman conditions, particularly in the less developed countries (Ibemi & Amole 2010; UNCHS, 1996).

This paper explores and highlights experiences of Operation Hlalani Kuhle or Garikai housing development and provision programme that can loosely be translated as Operation Live Well in Cowdray Park suburb of Bulawayo City, Zimbabwe. The programme was launched by the government in 2005 to innovatively facilitate the development and provision of decent accommodation largely to the victims of the earlier Operation Murambatsvina, a programme that had purportedly sought to clean urban centres of filth in the same year. The victims of the earlier programme had lost not only their livelihoods but also housing structures. The paper also highlights possible areas of improvement of this unique programme of allocating planned but unserviced housing plots to the urban poor particularly in developing countries that may lack financial and technical resources but has reasonable urban land to accommodate the majority of low income households.

2. Land and housing delivery approaches

Basically, land and housing delivery approaches can take two forms. The conventional and formal approach is the most dominant form of land and housing delivery in developed, transitional and developing countries. However, in most developing countries the shortages of resources, both financial and capital have led to the emergence and dominance of unconventional and informal approach to housing development.

2.1 Conventional and formal land and housing delivery sequences

Conventional housing programmes that religiously follow the planning-servicing-building-occupation (PSBO) sequence have for a long time proved to be very ineffective and inefficient in most developing countries (Berner, 1998, 2000; Tu & Wong 2002). Generally, there is a tendency to put emphasis and strict adherence on orderly parcelling of space, provision of water, sewer and roads infrastructure before construction and certification of housing units before occupation; processes that are time consuming and very expensive and stringent (Berner, 2000). According to the PSBO framework, planning precedes all the stages. It is done at the first stage of land and housing development process where land is allocated for various uses on the layout plan that include plots for housing, commercial, community facilities and on-site infrastructure. Equally important is the provision of services; a stage that immediately follows planning. At this stage water, sewer and road infrastructure services are provided before the actual construction of houses commences (Baross 1990; Gumbo 2014a, b). Occupation of the completed housing units can only take place when documents that certify and approve the standard and quality of finishes are issued. The sequence is depicted in Figure 1. Most governments have been emphasising on the implementation of this formal and rigid sequence (Baross 1990).

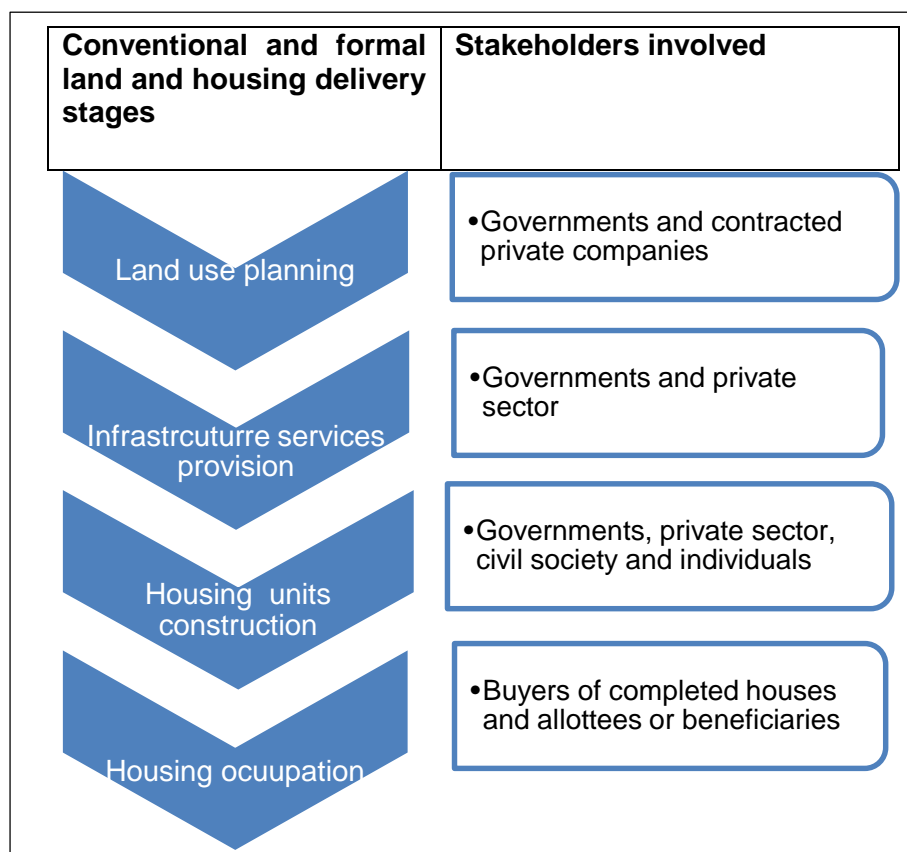


Figure 1: The conventional sequence of formal land and housing delivery (Author 2015, developed from ideas put forward by Baross, 1990; Gumbo 2014a, b)

As has been noted by various scholars, this framework has for a long time failed the majority of the urban poor as it has delivered very few and unaffordable houses (Baross, 1990; Berner, 2000; Gumbo 2014a, b). At various stages of the process that include servicing and building, several built environment stakeholders are engaged to perform tasks towards the achievement and fulfilment of formal land and housing development standards, thus strong bias for representation of space by professionals (see Lefebvre, 1991). The various stages of the land development and housing production process lead to substantial increases in costs that are unaffordable to urban poor households. In response, there have been clarion calls to governments to facilitate and enable housing development by other stakeholders such as the private sector, civil society organisation and communities to reduce costs and promote access (UNCHS, 1996; World Bank, 1993).

2.2 Unconventional and informal land and housing delivery sequences

The conventional and formal land and housing delivery system yields a few adequate and standard houses that only serve the interests of the few high and middle income households leaving out the urban poor forcing them to search for solutions outside the formal systems, thus leading to the proliferation of informal settlements (Berner 2000; Gumbo, 2014a; UNCHS 1996). This alternative approach delivers affordable housing units informally, for the majority of the urban poor with precarious incomes, albeit substandard. The homeless start by occupying land illegally before they start developing their housing structures. This can be viewed as the recognition of the rights of the urban poor to cities and efforts to achieve social justice as thousands of housing plots were allocated to the urban poor (Lefebvre 1991).

The World Health Organisations (WHO), the United Nations (UN) and several governments of developed, transitional and developing countries recognise housing as a basic human right. Consequently, housing is considered more than a physical product as it is multifaceted and encompasses the decision making processes of producing the structures, thus impacting strongly on the occupants and societies' economic and environmental well-being, security and health (Turner, 1976; WHO, 1989; Mohammad & Lee, 2010). Imperatively, governments engage in informal settlements upgrading thus demonstrating an acknowledgement of the existence of the urban poor in sub-standard settlements as well as granting their rights to live in cities (Lefebvre, 1991; UN-Habitat, 2009; Watson, 2009, 2010; Chirisa, 2012). As governments come to the rescue of the poor in informal settlements they start by planning for the housing schemes and then service the areas to transform them into formal settlements. As a result, the unconventional land and housing delivery follow the sequence of Occupation (O), building (B), planning (p) and servicing (S), thus adopting the (OBPS) (Figure 2) model (Berner 2000).

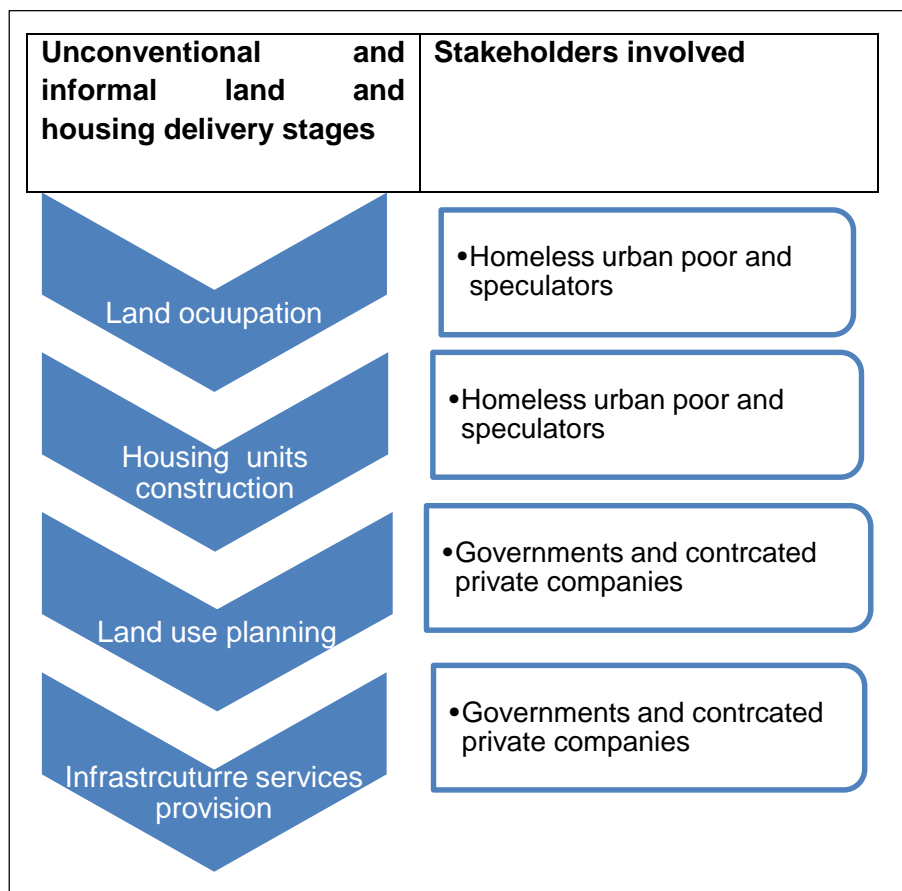


Figure 2: The unconventional sequence of informal land and housing delivery (Author 2015, developed from ideas put forward by Baross, 1990; Gumbo 2014a, b)

The OBPS land and housing delivery sequence serve millions of the urban poor residents as access to plots is not constrained by either income or regulations as squatting is the dominant approach. Besides, investments in the housing units can be phased and when governments intervene to upgrade informal settlements, the OBPS helps to promote the targeting of the poor compared to the PSBO. Notwithstanding the benefits of unconventional and informal land and housing delivery approaches; there are negative outcomes that among others include substandard housing units that not only lack security and are open to destruction anytime by authorities but are also devoid of basic infrastructure services, facilities and utilities as water, sanitation and electricity. Overcrowding and filthy within informal settlements have serious repercussions on the lives of the urban poor residents and their environments. Besides, informal settlements lack adequate space for both future expansions of housing units and developments and provision of community infrastructure such as road, sewerage reticulation and water supply.

Given the two extreme land and housing delivery approaches that give out opposing outcomes; there is therefore need for innovations that should seek to bridge the yawning gaps between the conventional and unconventional land and housing delivery approaches. Such an innovative approach needs to take into account the urban poor’s needs, rights,

capabilities and the gross spatial inequalities that are prevalent in most cities of the developing world. The approach should eliminate the risks that lie in losing investments in both housing development and community infrastructure, thus; promoting investments in the two areas by the urban poor. According to Chitekwe-Biti (2009) if the urban poor feel secure on the land they occupy, they can improve their physical environments towards making it adequate and liveable without any fear of victimisation and loss in the future.

3. Operationalising the Study

The study applied a case study research design approach. Bulawayo, the second largest urban centre in the country after the capital city Harare was selected for study as it benefitted immensely from Operation Garikai or Hlalani Kuhle or Live well. The reconstruction programme was implemented by the government immediately after Operation Murambatsvina of 2005. An existing low income residential suburb within the city that benefitted from the programme was identified and selected for empirical study. A qualitative research approach was applied to gather informative data from key informants who work for relevant government organisations, leaders of active and participating co-operatives and officials working for Bulawayo Home Seekers Consortium Trust (BHSCT). The BHSCT coordinates collective activities of participants that seek to provide community infrastructure. Purposive sampling was applied to select key informants from all the relevant organisations within the city. Snow balling was also used to identify officials that work with participants to develop their communities into adequate and habitable housing environments.

A combination of stratified sampling and convenience sampling was used to select participants in the housing programme for study. The suburb was divided into new and old sections depending on the period of settlement and when the participants of the housing programmes were granted the housing plots. This was done to understand the processes of accessing the housing plots and the levels of development since the inception of the programme. Convenience sampling was then applied to select individual participants within the selected sections of the sprawling suburb. Balance was also ensured by selecting those that had made extensive developments of their housing structures and those who had just started to clear their housing plots in preparation for construction. Semi-structured interviews were conducted with both key informants and participants of the housing programmes. The interviews were conducted face to face. Also, observations and photographic surveys of housing and infrastructure developments that are taking place within the Cowdray Park Extension suburb were conducted. The data was analysed using the content analysis methods where in themes were developed from categories and meaning from the responses that were gathered from participants.

4. Experiences of land and housing delivery sequences in Zimbabwe

Zimbabwe is a developing country that has been experiencing rapid urbanisation as well as serious shortages of decent housing for the majority urban poor since the attainment of its independence from colonial rule in 1980 (Gumbo 2013; 2014a). The country's urban population increased from 23% during the early 1980s to 38.3% in 2010 (Mutizwa-Mangiza, 1986; UN-Habitat, 2012; Zinyama, 1986). This is mainly attributable to the annulment of the previously restrictive legislative frameworks such as the vagrancy and pass laws that had been used during the colonial period to curtail black immigrants out of urban areas but were abolished at independence by the new black majority government in its quest to achieve an egalitarian society and meet the ideals of the political liberation struggle (Gumbo & Geyer, 2011; Kamete, 1999). Regrettably, this created population pressure on African townships that had strictly been developed to provide temporary dormitory and rented accommodation to the black majority during colonial rule. The country's urban centres had been developed and designed to cater only for a privileged few (Gumbo 2013). Consequently, the high numbers of rural migrants strained local government resources. The sad situation also led to high housing poverty levels that in turn led to widespread illegal extensions of houses in established low income and high density housing neighbourhoods as well as informal settlements although they have always been few by developing countries standards (Chipungu, 2011). The government instead maintained very stringent, high and costly planning legislation and housing standards that were inherited from the former government that had followed the British planning system religiously (Kamete, 1999).

Several initiatives have been adopted to inform the delivery of land and the development and provision of adequate residential areas that are well served with commercial, industrial and community facilities to meet people's aspirations and environmental and health conditions (Chaeruka, 2009; Chimowa, 2005; GoZ, 2004). With the assistance of bilateral and multilateral International and local stakeholders, the government adopted several strategies, policies and initiatives for instance the sites and services approaches (see Turner 1968; 1976) to improve the urban housing situation (MLGH, 1981; MPCNH, 1992). Among others, the institutions included local building societies such as the Central Africa Building Society (CABS) and Beverly Building Society and International institutions such as the World Bank (WB) and the United States Agency for International Development (USAID) participated in low income housing development schemes.

Although several planning statutes and Model Building By-Laws were revised over the years, they still ostensibly reflected British land and housing development standards (GoZ, 1996a; GoZ, 1996b). The adoption of full cost recovery conditions in the sites and services as well as core house schemes and the continued adherence to extremely high standards resulted in the failure of these governments' efforts in providing housing for the urban poor and lowly paid civil servants and informal sector operators, as the only not so poor could afford to service the loans (Gumbo 2005; Kamete, 2000; Mohammad & Lee, 2009). Some of the stipulations for instance the insistence on providing on-site infrastructure such as well drained gravel roads, reticulated water supply and sewerage systems remain unaffordable to

the urban poor as they are not aligned to local contexts of rapid urbanisation and high demand of low cost and affordable housing (The Herald, 2013).

Most of the programmes yielded very few and very expensive housing products leading to massive targeting errors as most of the schemes had been hijacked by the affluent who in most cases already owned houses. Such housing programmes left out the majority of urban poor who could not raise adequate funds to secure the housing products of such schemes. the delivery of few and unaffordable housing units to the urban poor through the rigid and strict PSBO sequence left the urban poor with no option in Zimbabwe but to resort to informal means of accessing housing such as squatting and illegal subdivision as well as unsanctioned extensions of houses in high density suburbs (Chirisa 2012; Chitekwe-Biti 2009).

In response to the proliferation of informal housing, the government destroyed all illegal houses and settlements. Due to its strong adherence to strict urban planning regulations, high standards of housing and infrastructure development forced the government to launch a nationwide demolition and eviction exercise, dubbed Operation Murambatsvina in May 2005 (Gumbo & Geyer, 2011; Magidimisha & Chipungu, 2011). The campaign led to widespread and destruction of illegal housing extensions and informal houses as well as eviction and relocation of the urban poor throughout the country's urban and rural centres. As can be expected of demolition and eviction programmes of such magnitudes, the catastrophe attracted the attention and condemnation by local and international institutions among them the United Nations-Habitat (Gumbo 2010; Tibaijuka 2005). Immediately the government launched the Operation Live Well in the same year to provide planned but unserviced housing plots to several thousands of the urban poor who had been negatively affected by the earlier operation, particularly those who had been on local authorities' waiting lists.

5. Innovations in land and housing delivery sequences in Zimbabwe

Following the folding up of the Operation Murambatsvina that had left thousands of urban low income households homeless in Zimbabwe's urban centres (Tibaijuka 2005), the government, launched Hlalani Kuhle or Garikai housing programme. The programme was implemented through the Ministry of Local Government, Public Works and Urban Development (MLGPW&UD), local authorities, housing co-operatives and affected individuals. Swiftly, innovatively and for the first time in the history of low income housing development; the Zimbabwean government with the assistance of urban councils and housing co-operatives, provided unserviced housing plots to several thousands of residents across the country. The innovation was mainly in the allocation of well surveyed and planned housing plots but without services for immediate occupation and housing construction. The housing programme led to the adoption of an extensively adjusted land and housing delivery approach; that follows the planning-occupation-building-servicing approach (POBS) Figure 3. The hybrid sequence borrows positive and progressive attributes from both the conventional/formal land and housing and the unconventional/informal land and housing approaches, thus producing a well blended approach.

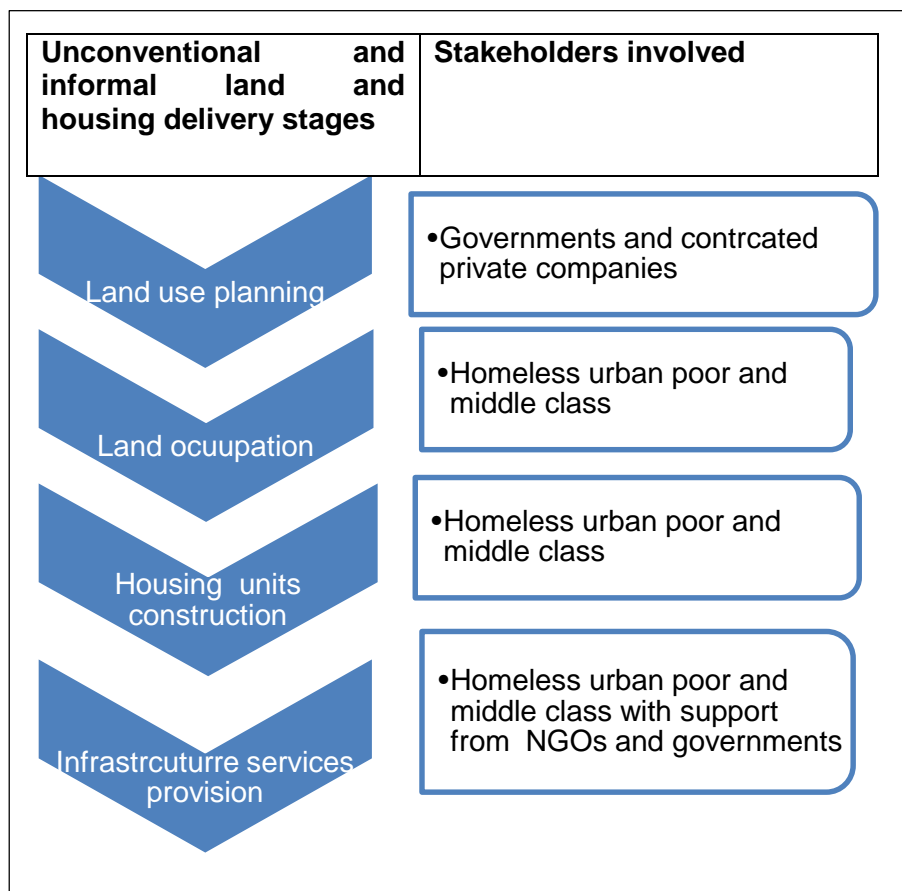


Figure 3: The hybrid sequence (bridging the conventional/formal and unconventional/informal) of land and housing delivery approach (Author 2015, developed from ideas put forward by Baross, 1990; Gumbo 2014a, b)

Equally, the bridged land and housing delivery sequence integrates the two extremes. Just like in the conventional approach, land is planned for before occupation. The parcelling out of adequate housing plots is done and spaces are left out for future incremental infrastructure developments where roads, water and sewer systems are provided. The same applies to spaces for community facilities such as schools, clinics, halls and churches that are planned for before occupation and building of houses on the innovative schemes. It has repeatedly been observed that land is the essential ingredient in low income housing provision; hence efforts should be made to provide land at affordable rates, within appropriate locations and also without any complications (Baross, 1990; Berner, 2000).

The orderly planning and allocation of plots by local government authorities ensures orderly development of urban spaces and guarantees security to the low income households that in turn gives them confidence and fosters a sense of security to invest in the development of housing plots. To promote affordability, the government supported the use of alternative materials such as burnt farm bricks or blocks and in some cases non-standard but appropriate alternative building materials and construction techniques that largely help to reduce the overall cost of the final housing product (Adedeji, 2011; Mohammad & Lee, 2011). Although in some few cases private land was also ‘grabbed’ by the homeless people;

in the majority of cases urban councils had planned and surveyed land within their jurisdiction but were lacking resources to service the land before they could sell it to the homeless for housing construction.

Participants in these innovative programmes confidently contribute towards the development of onsite infrastructure such as access roads, sewer and water reticulation and electricity without fears of losing their investments through evictions that are common with informal housing schemes. Similarly, encouraging the participants to occupy the plots and build their houses as they save for servicing promotes affordability and greatly improves targeting of the urban poor who are in most cases left out of formal housing development approaches. Learning from the two extremes necessitates the integration of positive elements from conventional and informal land and housing provision systems, thus helping the urban poor to access standard, secure and affordable housing over time.

5.1 Lessons from Cowdray Park, Bulawayo – Towards the composite and affordable land and housing delivery approach

Bulawayo is a modern metropolis boasting of wide and well-ordered streets and meticulously designed architectural buildings. The city is a major industrial, commercial and cultural hub and capital for the south-western parts of the country. The city has however been experiencing rapid urban population growth (CSO 2002) mainly due to rapid rural – urban migration and natural increase, leading to housing shortages and deteriorating living standards. While the city unlike Harare did not record widespread informal settlements and illegal extensions prior to the demolition exercise of 2005, two factors nonetheless that manifest the housing crisis are the ever bulging housing waiting list and high numbers of occupants per room so much so that in some old townships, a room can accommodate over 6 people. The city has always loathed and heavily discouraged informal settlements with only a few standalone informal shacks such as Ngozi Mine in Killarney and some few homeless people living adjacent to the city's dumpsites. However, before 2005, there the city had witnessed numerous illegal extensions and outbuildings in mostly in very old high density suburbs of the city such as Njube, Pumula, Mzilikazi, Makokoba, Iminyela and Lobengula. The urban poor renting such outbuildings were largely affected by the operation; hence many surveyed and planned but unserviced housing plots were allocated to those affected by Operation Murambatsvina and other struggling (Gumbo, 2010a). Specifically, in Cowdray Park extension alone about 7 860 high density housing plots were allocated to the low income households to incrementally build their houses and collectively provide on-site infrastructure services such as water, sewer, roads, schools and other essential utilities progressively. The innovation in making land and housing accessible to low income households resulted in the experimentation of a composite and hybrid approach (Figure 4) that makes housing affordable and improves targeting of the poor.

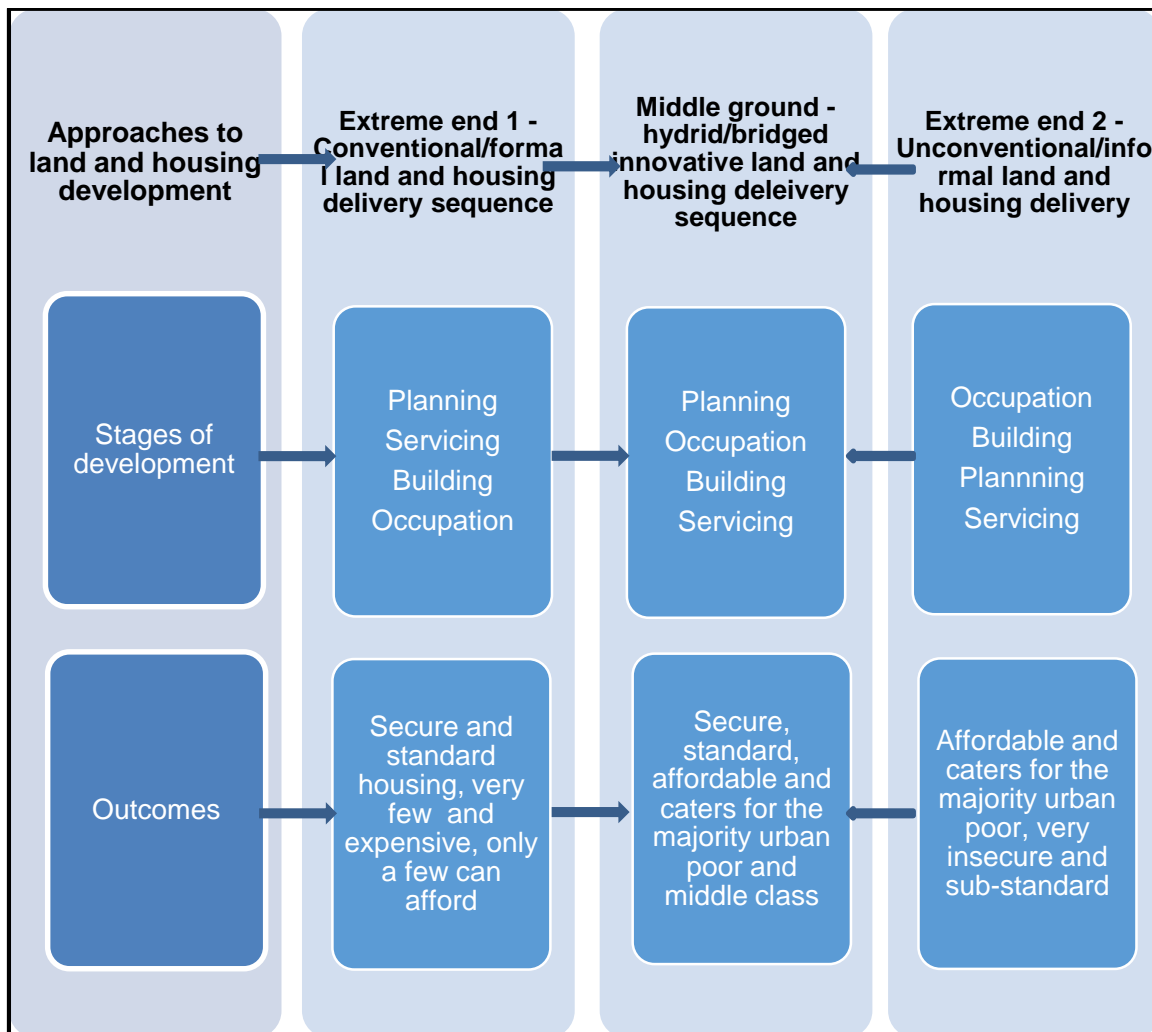


Figure 4: Hybrid and composite approach to land and housing delivery- bridging the gaps between formal and informal land and housing delivery approaches (Author 2015, developed from ideas put forward by Baross, 1990; Gumbo 2014a, b)

The adoption and use of the POBS sequence in land and housing delivery in this programme assisted in addressing the traditional problems of housing programmes that inadvertently miss intended low income households due to their lack of affordability considerations. Through the allocation of unserviced but well planned housing plots that had been part of already existing layout plans as well as the use of approved but a variety of house designs, the massively adjusted sequence helped to ensure orderly development and arrangement of plots that had spaces for future onsite infrastructure development. Participants paid very nominal deposits of US\$ 150.00 after acquiring their housing plots. They are also contributing very low monthly subscription fees of US\$ 5.00 towards the servicing and development of their communities. This made housing very affordable even to the informal employed that have erratic and unreliable incomes especially if compared to housing plots and completed units in the private market that are costing between at least US \$ 3 000. 00 and US\$12 000.00 respectively and require huge amounts of over US\$ 1 000.00 as deposits and regular instalments of more than US\$ 150.00 monthly. Generally, private companies in the city service very few stands for salaried high and middle income

people that can afford these high costs leaving out the low income people. This programme has witnessed extensive development of housing plots, where participants have put up structures of varying sizes and levels since 2005 as portrayed in Figure 5.



Figure 5: Incremental developments of structures on unserviced housing plots by low income households in Cowdray Park Extension since 2005 (Field Studies 2010-2015)

Incremental development of structures and investments that have been made as funds permit have led to the empowerment of the urban poor and enabled them to control the development process as espoused by various scholars and international institutions (Adebayo, 2011; Turner, 1976; World Bank, 1993). The community is being transformed into a liveable environment. To make the community accessible, habitable and eliminate any likelihood of outbreaks of environmental and health disasters, the community is being provided with access roads and serviced with sewerage system so that households stop relying on Blair toilets that pollute underground water (Figure 6).



Figure 6: Incremental developments of road and sewer infrastructure services in unserviced housing sites by low income households in Cowdray Park Extension since 2005 (Field Studies 2010-2015)

The low income households have been integrated within the greater Bulawayo city through massive access and district distributor roads construction. They are also participating in the wider economic and social activities of the city. Households are actively involved in the development of the wider community by making contributions towards the purchase of sewer and water pipes and the construction of roads and culverts. Field observations also revealed that communal water taps have also been provided throughout the communities as the households wait to be connected to the running water system of the city. Essential facilities such as primary schools and pre-schools have been built and more are being developed for the community (Figure 7).



Figure 7: Incremental developments of school and water facilities in unserviced housing sites by low income households in Cowdray Park Extension since 2005 (Field Studies 2010-2015)

Housing co-operatives and the consortium of the low income households have been instrumental in the pooling of resources together for the purposes of developing the suburb to the status of any other low income housing neighbourhood in the city. To avoid speculative tendencies by those who already have houses and high incomes; housing plots that are not occupied or not being developed after a reasonable period are repossessed. On a case by case basis, the urban poor that genuinely struggle to develop their housing are given a reprieve.

6. Conclusions and Recommendations

The adoption and use of innovative land and housing delivery approaches promote access and affordability of decent and adequate housing to the majority of the low income households in developing countries. Most cities of the developing world, particularly in the African continent have large stretches of land that can easily be planned for to ensure order in the development process and housing plots of reasonable sizes. The urban poor in most African have made huge investments in precarious and informal housing units of which if they could be allocated well planned and located housing they could house themselves and contribute to infrastructural development incrementally. Making occupation of allocated planned plots a major element of the low income housing programmes promotes affordability and help to achieve targeting objectives as those who genuinely need a formal

piece of land will be willing to live in temporary structures pending incremental development of both the plot and onsite infrastructure. Considering that governments that are mandated by relevant town planning regulations to develop and service land for housing the low income households before they can be allowed to build and the fact that the private sector only cater for those that cannot afford huge amounts of private infrastructural development, government should adopt programmes that allocate planned but unserviced housing plots to deserving urban poor.

There is urgent need to put in place enabling and empowering instruments to facilitate the participation of the urban poor in finding solutions to their housing problem. Chief among the critical ingredients to massive low-cost housing programmes for millions of the urban poor is land delivery. It is believed that emphasis on innovative land delivery approaches will significantly ameliorate the urban housing problem in the continent's urban centres. If millions of the urban poor that currently live in informal settlements of the continent were situated on secure planned and surveyed but unserviced plots, the provisioning of on-site infrastructure could be taking place without much challenges as currently experienced particularly the reorganising and relocation of some informal settlers to make space for roads, sewer and water infrastructure. In the quest to find common ground between the formal and informal land and housing delivery approaches that are fraught with serious challenges specifically when targeted to the urban poor, this study asserts that governments should adopt a significantly adjusted model; the planning-occupation-building-servicing (POBS) as it facilitates affordability and significantly achieves targeting of the urban poor in African cities. The model recognises the urban poor's needs, rights, and capabilities and also the gross inequalities commonly experienced in most cities of the developing world.

As long solutions to urban housing poverty leave out the critical and central factor of land provision and ways of innovatively making it available at reasonable costs to the urban poor, the majority will always live in informal settlements or sub-standard housing in cities of the developing world. African governments should pro-actively, continuously and timeously identify and efficiently expropriate suitable idle land around the boundaries of cities and cede it to local planning authorities for the purposes of allocating parcelled plots to low-income people before the housing problems get worse and informal settlements proliferate. In cases where the land is privately owned, central governments and local planning authorities should timeously and effectively enter into arrangements with owners to compensate appropriately. Local planning authorities should also identify vacant idle land between existing residential suburbs for the purposes of planning for it and allocating to deserving urban poor. Governments of African countries should build the capacity of their departments that are mandated to conduct physical planning and surveying of land for housing purposes. This will enable them to timeously and efficiently support city councils that always need the support of central government institutions to discharge their duties, functions and roles. Similarly, local planning authorities need to improve the resourcefulness of their physical planning and land surveying departments. Resources that should be prioritised to improve the operations of both central and local government planning and land surveying departments include finance, equipment and machinery, engaging technically skilled and experienced human resources and occasionally retrain them with also the ability to retain them. Such efforts will ensure that land is timely surveyed and planned for to produce layout plans that necessitates the

allocation of land for housing development as well as commercial, industrial and community facilities and on-site infrastructure to attain self-contained communities.

The allocation of the housing plots should take into consideration the needy and those without properties and mostly on the waiting list and already organised in co-operatives to achieve targeting objectives of low –income housing programmes. There is greater need to support the beneficiaries of housing plots by organising them in pooling their resources building their houses and contribute towards the serving and physical development of the community at large. Non-Governmental Organisations (NGOs) should actively promote the transfer, adoption and use of low cost technologies by working closely with the urban poor (Madubeko, Ingirige& Sexton 2009) Community Based Organisations (CBOs), city councils and the central government. There is also need for continuous research, development, use and mainstreaming of affordable and building materials such as stabilised earth, innovative low cost technologies for servicing and developing these low income communities for example in the prefabrication of sewer and water pipes. There is also need to reflect innovations in land delivery and housing and building statutes hence they should significantly be adjusted. Eccentric sources of housing finance by the urban poor (Gumbo, 2010b) should be supported. These could be in the form of urban poor's income generating initiatives that predominantly lie outside the formal sector activities and micro-finance institutions. Supporting informal economic activities such as home based trading and manufacturing facilitates the linkages between home and work for the greater benefits to the urban poor. This works towards supporting supply side instruments of making housing affordable such as revision of serving and building standards by strengthening the demand side instruments such as income generation support.

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