

THE CREATING OF A SUSTAINABLE BUILDING INDUSTRY IN THE HOUSING SECTOR OF LUSAKA, ZAMBIA

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ABSTRACT

The paper explores the possibilities of creating a sustainable building industry in Lusaka the capital city of Zambia, Zambia which has been labelled a 'highly indebted poor country'. The paper will focus on the housing construction industry, investigating a range of housing strategies that have been used in the city from state built housing, site and service, squatter upgrading and the concept of self-help. It will give an overview with critical analysis of what has already been done and explore ways in which housing provision can be tackled in the context of a poor country. The current socio-economic context suggests that housing may not be a profitable industry for the regular construction sector. The paper will bring forward evidence of how constrained the building industry in the Lusaka currently is. Blaikies' pressure and release model will be used to examine pressures which impact on the issue, for instance access to education and finance, trade and aid, and the human dimension including health, skills and political development. Against this analysis the paper will highlight positive possibilities of how to make a significant contribution to creating a sustainable housing construction industry and where there needs to be major change for it to be further developed.

INTRODUCTION

The creation of a sustainable house building industry in Zambia is a development issue. Development according to Michael Todaro has three core values (Todaro, 1992,p101) categorised as life sustenance, self-esteem and freedom from servitude. These are embodied in the Universal Declaration of Human Rights (UDHR).

The first value, the value of life sustenance, is described by Iain Byrne in his book on the human rights of street and working children as 'substantive rights of which omissions violate the right to life'. This is found in Article 25 of the UDHR, as: -

'Everyone has the right to a standard of living adequate for the well-being of himself and his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.'

The second value has to do with self-esteem, to be able to respect oneself and view oneself as worthy of being. The ability to be innovative and improve one's situation often goes hand in hand with whether a person believes they can do so. Poverty is known to create despondency. The third value is freedom from servitude, to be able to make choices and have a say in matters of ones own environment. Sustainable development is not realised when people are experiencing poverty, have very low self esteem and feel they are incapable of doing anything, and also because they are excluded from making choices due to their social position. The IUCN, World Conservation Union defines sustainable development as:

'achieving a quality of life that can be maintained for many generations because it is; socially desirable, fulfilling people's cultural, material and spiritual needs in equitable ways, economically viable, paying for itself, with costs not exceeding income and ecologically sustainable, maintaining the long-term viability of supporting ecosystems. (IUCN, 1993, p10)

Another defines sustainable development as a process that requires

'change in the political, social, economic, institutional and technological order, including redefinition of relations between developing and more developed countries'. (Kirdar, 1992, p9)

To achieve sustainable development is a global challenge, a challenge that is considerably bigger for developing countries.

Lusaka's building industry has been affected by the socio-economic situation of the country, which for some years has been declining. The building industry is said to be a good indicator of what the economic situation of a country is. Lusaka the capital city of Zambia, which was designed on the 'Garden City' principle of Doxiadis has been overtaken by development which the original planners of the city did not foresee, being that of mainly the informal sector characterised by what are called squatter settlements. Whether the term squatter can be applied to about 80% of Lusaka urban population, clearly a majority, is a subject for debate. Keeping this in mind and also noting that about 53% of Lusakas urban population is living in poverty (CSO, 1998, table 12.2a), how then do we plan to create a sustainable house building industry?

AN EVALUATION OF HOUSING POLICY IN LUSAKA, ZAMBIA

To evaluate housing policy in Zambia a chronological framework with first the development approach then the main housing policy will be used. This gives context to the different housing policies and also makes its analysis easier.

Colonial period

Development approach

According to Robert Home in 'Of Planting and Planning, the making of British colonial cities' there were three main ideologies running concurrently during the colonial period, the ideology of state or crown control, capitalism and the utopian idea. These views expressed themselves in the planning and implementation of housing social policy particularly in the formation of capital cities such as Lusaka, which was chosen as a site in July 1931.

The ideology of *state or crown control* was for the reason of having greater administrative control of the colonies. It was a kind of decentralising of the crowns control of the colonies, the spatial relocation of decision making, and the transfer of responsibility for specific functions to the local government (Klugman, 1997, p5) in this case the colony. It was not a fully decentralised system as the district administrators were people selected by the crown, to represent their interests.

The second ideology was one of *capitalism*, one through which the British colonial empire had been able to expand. In the forefront of the capitalist ideology was the aim to maximise wealth at minimum expenditure.

The *utopian* view was another ideology, which expressed itself in the planning of colony capitals as of one of an experiment of social control, trying to create better societies than existed in Britain during the industrial period. This ideology was in conflict with the one of capitalism that saw its greatest triumph during that period.

Underlying these ideologies was the growing interest in public health, which to a great extent determined the physical planning of colonial cities. The segregation of ethnic groups in different communities was partly as a result of the public health advocates for segregation like Dr Simpson. The belief that the mixing of races led to a higher incidence of disease led to having African housing moved to the periphery of municipal boundaries (Home, 1997, p138). The constructs of segregated planning are still visible in Lusaka today, with Kamwala a predominantly Zambian Asian community, Thorn Park a residential area with a big mixed race community and Kabulonga which was a predominantly white, high cost residential area.

Main housing social policy

Housing policy during the colonial period was mainly influenced by the need to provide housing for the growing labour force recruited mainly from surrounding areas and far away villages.

In 1940 major strike actions in the mining sector triggered off by Europeans and later joined by Africans demanding better salaries and living conditions led a commission of enquiry to be formed that gave rise to several recommendations. Some of these were to have employers have legal liability to provide housing for their employees; have housing improved to acceptable levels by the use of permanent materials; each house to have at least two rooms; and all houses to have water and sanitary facilities. It also recommended the creation of a department for African housing.

Following the commission's recommendations a joint Department of Local Government and African Housing was created. The obligation and authority to build houses for Africans was given under the Urban Housing Ordinance of 1948. Housing for Africans was in townships segregated from European settlements by at least 12 kilometres.

A particularly good example of a housing project of this development period would be the Old Kabwata Huts, housing which was built for indigenous Africans.

Transitional development plan (1965 -1966)

This development plan was initiated soon after Zambia's independence that had been on the 24th October 1964.

Development approach

This period saw the assessment of the country's resources and an aim to coordinate the activities of different sectors of the country in order to know which directions to move forward. It was setting the stage for *modernisation* strategies to development with an urban and industrialisation focus. With the end of the colonial period and its restrictions on the indigenous population saw the emergence of a new urban elite with a view to development that hoped to emulate that of its former colonial rulers. The line of rail that runs from the copper belt to southern regions of Zambia was planned for manufacturing industry. The large number of construction projects planned from housing to schools mainly in urban areas meant that building industry developed along that line of rail. Later plans that tried to focus development to the rural areas would have meant large infrastructure costs due to expensive transportation of building components and the lack of a skilled labour force. The northern part of Zambia was almost inaccessible except by a dangerous road aptly called 'the hell run' till the early 1970's when the 'Great Uhuru' rail line of freedom rail line passed through it.

Infrastructure development conducive to capitalist industrial development, such as telecommunications, transport systems and administrative facilities focussed mainly on Lusaka and contributed to its rapid urbanisation.

Main housing policy

The main objective of the transitional development plan was to promote owner - occupation as a fundamental right. That is the government aimed to have people who occupied a house have legal entitlement to it. As the government financed housing it meant to some extent selling housing property over to sitting tenants. During this period this was not achieved as the government continued the policy of housing tied to employment at subsidised rent rates (Tait, 1997, p213).

Almost a fifth, 17.5% of the national budget was committed to housing programmes, with the government planning to construct 5000 housing units in urban areas and make improvements to existing housing units. The housing budget despite statements towards a commitment to low income housing committed more than half to civil service housing which was to standards similar to those of colonial times.

This was despite the fact that rural - urban migration increased and so did the development of squatter settlements; migration from rural areas between the periods 1963 and 1969 increased by about 60% (Silavwe, 1994, p242).

An example of housing development during this period would be Libala Stage 3, 4a and 4b.

First national development plan

Development approach

A *welfare state* approach in the later half of the 1960's characterised development with an emphasis on redistribution in an effort to rectify the inequities of the colonial period. There was a focus on education with the aim that it would rapidly increase the amount of skilled labour in different economic activities. But as with the transitional development plan this focussed on urban areas including Lusaka.

Main housing policy

Housing policy in this period was geared to funding local authorities so as to enable them to build houses for rental purposes for the low-income groups, in this case mainly civil servants in the lower wage bracket. Rent rates were kept low at costs that made it difficult for local authorities to produce their own housing stock and thus the continued dependence on central government for funding of local programmes.

Highly conventional houses were erected using prefabricated concrete components with an aim of providing housing faster and cheaper. With building regulations still very tight house transformations were not very common and as such the problems of extending a property build in prefabricated components didn't pose complications then. These housing plans were based on a model of a nuclear family and not that of the extended family.

Housing policy had started to acknowledge the growing squatter settlements and the government of Zambia's response was to advocate for basic 'site and service' schemes. The basic site and service schemes were plots provided with a standpipe and no sanitary facilities as plot holders were expected to dig pit latrines. These developed as a result of a lack of funds to provide fully serviced lots of land.

Chelston North is an example of a Lusaka housing project of this period.

Second national development plan

Development approach

A *redistributive* development approach was still the aim under this period of between 1972 and 1976, including an emphasis on rural development. Despite intentions towards the development of rural areas, there was still an urban bias.

Main housing policy

The main objective this plan set about was to encourage home ownership through the legalization of squatter settlements by upgrading them. Upgrading meant the provision of piped water, sewage and waste disposal, roads and surface water drainage, street lighting and communal facilities like health centres and schools.

The areas around squatter settlements were planned for new housing based on site and service schemes, with the aim to decongest the settlements.

The period saw the formation of the National Housing Authority, which was to build houses for sale. This board was to replace the African Housing Board that had been set up in the colonial era.

In addition, a housing fund was set up within the Zambia National Building Society from which loans were to be given in the form of mortgages. Financial institutions in the same period were asked to put aside in their annual budgets money for housing loans.

Chilenje South exemplifies development of this period in Lusaka.

Third and fourth development plans

Development approach

Development strategies during this period were aimed at moving away from capitalism and embracing socialism. There was emphasis on looking inwards by the increased utilisation of existing productive capacities that for the construction industry would have meant adoption of labour intensive technology. This shift was an attempt to reduce internal consumption of external goods, as the country was facing

high debt after the price of copper kept falling after 1975 and conflict in neighbouring countries. It was also an attempt to mitigate against the rise in poverty after the implementation of *structural adjustment* programmes in the period between 1983 and 1985, which the government abandoned in 1987 due to political discontent. Failing to combat a falling economy the country entered new negotiations with the IMF/World Bank, which decontrolled the prices of consumer goods (McCulloch, 2000,p4). Dramatic rises in prices like that of the staple food maize led to food riots and the installation of a democratic government from early elections in 1991, with a change in leadership from Kenneth Kaunda to Frederick Chiluba.

Main housing policies

The overall housing policy in these development plans was aimed at attaining minimum shelter standards. The promotion of low-income housing continued, and the significant change was the gradual shift away from squatter upgrading projects. Institutional housing was to be promoted, that is employers were encouraged to provide housing for their employees.

It was envisaged that a housing bank would be established with the sole aim of assisting low-income earners. In addition it was also suggested that personal savings should finance home ownership. It is not clear whether it had been achieved, but even if it had been it would have assisted those mainly in formal employment and not so much the growing informal sector of Lusaka.

A dimension to these development plans was one that was to improve living conditions in rural areas with the aim of reducing rural - urban migration. This plan came with the growing view that squatter settlements looked unsightly.

The National Housing Authority during the later period was building 'core' housing, which was basically the construction of a room or two to be extended by the purchasers of the property. For people in middle to higher income groups core housing proved a success, as people were then able to develop their house according to their needs and their available income.

The Kalingalinga squatter upgrading programme that was a joint venture between the Lusaka District Urban Council (LUDC) and the German aid agency GTZ started in 1980 and was completed in 1987. GTZ provided two thirds of the programmes funding. Kalingalinga is located about ten kilometres east of the central business area and is bounded by marshlands on the west, Kabulonga a high cost residential on the south and Mtendere also a site and service settlement on its east.

The programme was aimed at integrating physical and social as well as economic improvement. The physical improvement was to be the installation of water pipes, tarmacing main roads, street lighting and house improvement through loans. Social improvement included the building of a school, clinic and community centre through self-help initiatives that is the community gets involved in the construction themselves. It used participatory methods having community members involved in the decision-making, planning and its implementation. The local economy was also to be improved by way of a micro loan system to improve local enterprise.

The project managed to achieve its objectives of home improvements, including the building of core housing of one room that over time has been extended to suit household needs. It created a community structure through which decision-making could be carried out. Social public services like a school and a clinic were built.

The major problems the project faced were the rising inflation that made it imperative to have the programme not exceed its time. The administration of the project too was said to have been difficult, as it had to be integrated into the normal operations of the local authorities.

Presidential housing initiative

Development approach

Neoliberal development policies characterised this period with the government of Zambia adhering to stringent structural adjustment programmes. There were moves to reduce government spending and it included privatisation of its public institutions, reducing the size of the civil service and institutional reforms. Ways in which the government could raise money such as cost recovery on public services, new taxes, particularly on property were implemented. As these policies included the liberalisation of

trade, mainly for goods coming in, there were incentives for foreign investors and goods coming in, such as tax breaks and reduced customs duty.

The policies also emphasised decentralisation and democratisation as objectives to be met. Democratisation was to be achieved through giving communities a voice in the choice and implementation of developments; this meant that the state should show support for civil society and non-governmental organisations. It also meant giving more power to the local authorities, in that they were supposed to decide the implementation strategies and also to be responsible for the elections of mayors.

Main housing policies

Under this housing plan, which was initiated in 1999, the main aim was to revive the housing construction in order to promote ownership of housing. This included the sale of council housing in order to free investment in the housing sector. The sale of council housing was seen as a political manoeuvre particularly as houses were sold way below the market price. A consensus is that it managed to achieve home ownership.

The money realised from the sale of council housing was to be used for the construction of new housing with the aim of reviving the building industry and creating employment for trades men, material suppliers, architects, builders and other related industry.

The programme was first to be piloted in Lusaka with its operations being managed by a joint council of the existing National Housing Authority and the new Presidential Housing Initiative. The PHI has since been dissolved following concerns about its legal status. If it had been successful the project would have then been extended to other urban areas such as in the Copperbelt region of the country. Funding for these projects was to have been from the proceeds of the sale of existing housing stock from former parastatal institutions.

There were also plans to revive squatter upgrading programmes but these were not realised and the housing programmes still had a bias towards high-income earners.

The Bennie Mwinga housing estate located in Chainama a suburb in Lusaka was the first project to be piloted. It involved the construction of high cost, medium cost and low cost housing units, the construction of community services was to be left to interested investors. The site was fully serviced with water, sewerage and drainage facilities, electricity and telephone lines and tarmaced road network.

The project experienced several difficulties amongst them being the shortage of skilled builders as numbers of them had immigrated to countries in the region because of little construction for them. The procurement of building components was costly and roofing materials had to be imported. The number of concrete blocks being produced locally even from the informal sector could not have reached the demand created by the project so more equipment had to be imported to increase production. The programme proved very costly such that the price of the housing units had to be pegged below their costs of production, which were still beyond the reach of the majority of people in Lusaka.

CRITICAL ANALYSIS

A framework for analysis

As shelter is very much a part of people's lives, the paper seeks to analyse housing programmes and policy from the point of view of people's vulnerabilities.

Blaikie's Disaster and Pressure Model, which looks at the vulnerabilities found in an environment by taking a broad view of all the factors that would increase one's vulnerability, will be used to analyse housing in Lusaka. Vulnerability is described as 'the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist, and recover from the impact of a natural' (Blaikie et al., 1997, p9). This model maps out these factors so as to clearly identify where to mitigate. Mitigation in Blaikie's model is looked at as reducing the worst effects of violent and sudden natural hazards. This is viewed as being more realistic than just relief programmes and within the means of most developing countries (Blaikie et al., 1997, p233).

Blaikies' Disaster and Pressure Model categorises the progression of vulnerability into three parts, namely, root causes, dynamic pressures and unsafe conditions. The *root causes*, which can mean vulnerabilities that are a result of, limited access to resources, power or a failed economic or political system. *Dynamic pressures* are described as those that cause an increase in vulnerability and may be a lack of local institutions, appropriate skills and press freedom or rapid population growth and urbanisation. *Unsafe conditions* that exist such as a fragile physical environment or local economy, social exclusion of certain social groups and minimal public action are also described as factors that increase vulnerabilities.

Disaster in an environment is one that can be described as an event or events that cause pain, loss or damage or that disrupt people's livelihoods. While disaster cannot always be prevented its effects can be mitigated or dampened. When people lose their jobs or experience death in the family it is a localised almost individual disaster; when this is happening to a large number of people in a society, it is a societal disaster. Linking this to sustainability, Blaikies' model outlines factors that can very much be connected to housing, and to create a sustainable building industry

Root causes

It may be difficult to mitigate against the root causes of a situation that inhibits the creation of a sustainable housing industry because the root causes are deeply entrenched such as a failed economic or political system.

The fact that politics and the economy are tied together means that whatever activity there is in one sphere is likely to affect the other. An example is how the highly centralised land administration system puts housing economically out of the reach of a large section of the people of Lusaka.

There was a drive to decentralise in the early eighties resulting in the setting up of a Ministry of Decentralisation, the aim of which was to allocate administrative authority at the provincial level. For a system to be called truly decentralised it usually has achieved the following:

1. The central government has probably enabled local or provincial bodies to make their own policies and decisions. That would include the administration and allocation of land.
2. It has physically moved the administrative offices of central government to other parts of a country,
3. A country's local or provincial authorities are able to fund themselves and don't entirely rely on funds from central government.

Decentralisation being a political issue and also being a condition under structural adjustment policies, can be said to have not happened in Zambia. Under structural adjustment policies there was more focus on deregulation of trade barriers and a push for the democratisation of governance.

Almost all of the country's land administration is carried out from the capital city Lusaka. Apart from the inconvenience caused to people forced to travel sometimes great distances to apply for title deeds or deposit plans for subdivision, it causes a pile up of administrative work in the city.

For property developers in different sectors of the community the highly centralised land administration greatly raises the cost of building. Money saved in banks for property development in Lusaka loses its value rapidly due to high inflation rates and rapid devaluation and so the need to spend money on something concrete quickly is imperative.

Dissatisfaction with the current trade relations between developing and developed countries is an area that is now being increasingly highlighted with positive future possibilities. An equitable world trade would help mitigate against a falling kwacha that prevents the purchase of building materials for potential house builders. The cost of production of a unit of housing is usually related to how much a pocket of cement costs, as the cost of cement rises, the cost of production is perceived to rise. A move away from this perception may assist the development of more sustainable construction.

The law on the sale of land in Zambia that prevents people from selling land they have not developed, has also stemmed the flow of capital moving around the construction industry. People being able to have an income from land gives them more choice in deciding whether they want to use the capital realised on the investment of cheaper property.

The lack of transparency due to a highly bureaucratic system enables the accumulation of land into the hands of a few urban elites. House property development held by this small group is usually for rentals, which are available still to only a minority in Lusaka. It does not facilitate the movement of capital to the large 'informal' economy that now sustains a large part of urban dwellers in Lusaka. Relying on 'the golden hand of the market' to solve the problem of access to land for the majority is clearly not working.

In the housing policies of the national development plans, strategies to facilitate the movement of capital were not outlined and the only reference to capital was the setting up of a building society that was to help people with loans. They also clearly stated an employer's duty to provide housing to its employees. This dealt only with the movement of capital to people who were able to have access to loans and mortgages, who were usually in the advantaged minority.

People's ability to participate effectively also depends on whether they have been empowered. Being 'empowered' means whether they have some education to be able to make well-informed choices, have access to resources whether financial or material, are allowed to have a voice, feel a sense of worth. Even though people in Lusaka participate in local and state politics a lot of them do not actually get involved in the formulation of policy. For instance, although during the 1980's women had been actively involved in community organization of George a neighbourhood in Lusaka, they had not participated in the formulation of demands related to housing policy (Schlyter, 1988, p138).

Dynamic pressures

Lusaka is the most urbanised city in Zambia and the pressures on the existing infrastructure continue increasing. About 80% of the city's dwellers live in upgraded squatter settlements and informal settlements. The majority of them do not have access to safe water, sanitary facilities or road and drainage systems. As more people move into the city the strain results in higher incidence of disease of which are cholera, malaria and tuberculosis, life threatening diseases. There has been a reduction of squatter upgrading projects and funds allocated for the maintenance of the city's infrastructure go mainly to higher income neighbourhoods.

Local institutions are supposed to be the link between central government and communities. The lack of these institutions in communities reduces people's ability to effectively engage in housing provision. Zambia has seen the faltering of many of its technical institutions like trade schools and thus a reduction of skilled tradesmen.

The type of building technology used in the building industry affects the amount of affordable housing produced and also limits the numbers and groups of people involved in the construction industry. This includes imposition of building regulations, which are often at odds with local traditional building methods. New site and services were not planned with the possibilities of using thatch, but corrugated iron sheets and asbestos sheets. These building components require importation of raw materials in their manufacture, making them more expensive and out of a lot of people's reach.

The domination of the concrete block has inhibited the use of other more readily available building materials like sun dried bricks or straw bale which are a combination of clay and straw. The government of Zambia in its national development plans neglected to promote the use of appropriate technologies in its pursuit of modernisation. Instead, they invested in considerable financial and human resources in technologies that were at odds with the countries resources, which after structural adjustment policies are unused, or under utilised (Tyrell, 1996, p16).

Findings from the Living Conditions in Zambia study in 1998 show that there were no women employed in the construction industry in Zambia (CSO, 1998, table 9.6). There are a very small number of female architects and a few now involved in site construction work. The PUSH (Peri-Urban Self-Help) food for work programme that carried out activities like road and drainage improvements in settlements like Kalingalinga initiated by the NGO CARE showed that women can be actively involved in the construction industry given the right incentives, in this case food for their families.

The Zambia Institute of Scientific Research and the Copperbelt University carry out research into the use of appropriate technology; the main problem has been the dissemination of research findings. National development policy has not really extended to improving information links between various state institutions that include primary, secondary and tertiary education, the media and others. In

addition, the merits of certain types of more traditional building materials have not been advocated. This may be due to modernisation strategies geared towards a more western ideal. The emergence of a number of lodges in Lusaka with thatched roofs like Lilayi and Chisamba lodges could be used in advocacy to overcome perceptions that some building materials are not for poor people. The media like radio, newspapers and television could play a role in having home improvement sections.

Unsafe conditions

Lusaka's physical environment can be hazardous particularly for poorer communities who are forced to live on more fragile land like overspill areas. Kalikiliki is one such community that is basically in an overspill area, an unauthorised housing area bounded by two high cost residential areas and a site and service, self help community, Mtendere. The lack of local information on preventative measures results in people continually losing their assets. In recent years people's inability to obtain land swiftly through the authority has resulted in them recklessly building houses in dams that were dry in drought years.

The AIDS crisis in Zambia which has affected almost every family in some way has impacted the construction industry with the loss of skilled and semi skilled workers. The second highest number of deaths occurs in the age group 25-44 years, the highest being children under five (CSO, 1998). Unless these conditions start to change dramatically it means loss of a productive labour force, a higher number of young people needing housing and thus more pressure for the state to provide social housing.

Discussions with a civil society group called Operation Young Vote on the rising number of orphans brought to light the issue of inheritance. Public action on inheritance in Zambia has mainly dealt with the issue of property grabbing, which is usually the relatives of the deceased grabbing property from widows. The discussion centred on the absence of public action towards the lack of policy towards encouraging parents to save for the next generation. The next generations are left vulnerable with the responsibility of taking care of younger sibling for food and education usually denying them the opportunity to invest in housing. The break down of social safety nets due to a harsher economic environment has resulted in children whether orphans or abused being pushed to live or work on the streets. This poses an increasing challenge for there to be a framework that enables this group an opportunity to have housing.

Social exclusion has characterised housing policy from colonial time to the present. There has been a distinct bias towards the provision of middle income to high-income housing. Conventional housing labelled 'low-income housing' fails to cater for what may be seen as middle-income earners. The transitional development plan which allocated more than half the housing budget to civil service housing showed a bias against low-cost housing (Tait, 1997,p214).

Politics too has played a role in that having certain political affiliations will either enable you to have access to land and property or will exclude you. The holding of political party cards in settlements like Mtendere has apparently led to the formation of landed elites, that is people owning land and property and thus having considerable power over issues in the area. The flip side is that political affiliations and party organisations in communities enable residents to be more involved in the political and administrative structures of the city (Williams et. al, 1986, p165).

Women and children still have limited access to the resources and facilities that would enable them be actively involved in the construction sector. While there are constraints on women to acquire housing Ann Schlyter's longitudinal studies of George' an upgraded squatter settlement in Lusaka, shows that women have been able to come up with their own housing strategies, but need appropriate policies to be able to realise their full capacity.

CONCLUSIONS

The developments analysed demonstrate and include elements of what can make a more sustainable building industry though they have not previously been brought together in a single philosophy. The paper shows that Blaikies' pressure and relief disaster model can be used as a development model as it highlights areas with vulnerabilities and creates a framework which can be used to mitigate against them in a society.

Whilst vulnerability is perceived largely as a negative range of issues there are positive aspects. Some of these areas are focussed on and though not exhaustive will hopefully highlight areas for possible starting points or for further work.

There are already established starting points like Ann Schlyter's studies of women's housing strategies in George, Lusaka. Gender relations like most things in society are dynamic and development planning for areas like housing should be able to take this into account. The studies in George show that women succeed as well as men in their housing efforts and their greater difficulties are compensated for by their stronger commitment to their houses (Schlyter, 1998, p149). Governments' intentions towards the empowerment of women, particularly in regard to access of resources shows commitment in that direction. Further research into its effective implementation needs to be done keeping in mind that that gender relates to both men and women and their relationship in society.

While disasters like the AIDS crisis and famine continue to make society more vulnerable it also creates an opportunity to galvanise people into action to prevent the situation from becoming more intolerable. Housing is security and can tide a family through crises like death and loss of income. More investigations into people's coping strategies need to be done in order to see clearly where people's strengths and vulnerabilities are as they often give programme starting points. The paper identified problems of inheritance with particular reference to young people; further research in this area would also be beneficial.

NGO's doing community work or creating civil society have potential for aiding a house building industry through coordination with the local authorities for better disbursement of resources. The country's development plans should be able to reflect the work and efforts done in order to avoid duplication of projects and so be able to see shortfalls. Better coordination between government and NGO's is important for accountability on the successes and failures of projects. A positive aspect is that empowerment of a population is also achieved when people including their government are seen to be able to take control of development programmes previously controlled by donor countries. This would mean donor agencies being willing to work with local authorities even though this might make programmes a little more difficult to run.

There is an existing pool of information that can be disseminated on appropriate building technologies in local institutions by creating effective communication links through staff and personnel exchanges, for example by having scientists working in research give lectures at training institutions.

One reason for Lusaka being highly urbanised is that there has been substantial rural urban migration. There is evidence of intent to develop rural areas in order to stem this flow of people. The creation of a sustainable building industry in Lusaka has to be seen in the context of a larger national development plan that will reduce the pressure on the provision of infrastructure. It is important also not to be over ambitious.

It is possible to create a sustainable building industry in Lusaka and its creation can be seen as a process of mitigating against the vulnerabilities in a society, working on existing strengths and creating new ones.

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