

**WOMEN, FOOD & POVERTY:
EMPOWERMENT THROUGH PARTICIPATORY PLANNING IN
NAIROBI SLUMS**

By

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**A Thesis Submitted to
The Faculty of Graduate Studies
In Partial Fulfillment of the Requirements for the
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A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of

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Of

Master of City of Planning

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Finally, best regards to my supervisory committee: Rae Bridgman, Basil Rotoff and Kelley Beaverford for their guidance, insights and support in completing this document.

ABBREVIATIONS

<i>BLP</i>	<i>Best Practices and Local Leadership Program</i>
<i>CDRA</i>	<i>Community Development Research Association, South Africa</i>
<i>CIDA</i>	<i>Canadian International Development Agency</i>
<i>DFID</i>	<i>Department for International Development, United Kingdom</i>
<i>FAO</i>	<i>Food and Agriculture Organisation of the United Nations</i>
<i>ICLEI</i>	<i>International Council on Local Environmental Initiatives, Canada</i>
<i>LA 21</i>	<i>Local Agenda 21</i>
<i>NGO</i>	<i>Non-Governmental Organisation</i>
<i>SAP</i>	<i>Structural Adjustment Policy</i>
<i>UA</i>	<i>Urban Agriculture</i>
<i>UNDP</i>	<i>United Nations Development Program</i>
<i>UN-HABITAT</i>	<i>United Nations Human Settlement Program</i>
<i>WSSD</i>	<i>World Summit on Sustainable Development</i>

GLOSSARY

Roundabout: Also known as a traffic circle, this is a road intersection at which all traffic streams circularly around a central island. In majority of African cities, these islands are optimal for landscaping and particularly public art projects.

Slums: A slum is an unplanned settlement without formal planning, infrastructure or municipal services. Although they are characterised by low quality housing, high poverty and unemployment, efforts are being made through public-private partnerships to engage communities in improving physical and social conditions.

Squatter settlement: This is an unplanned settlement without legal instruments concerning the use of land for housing or agriculture.

Urban agriculture (UA): In this thesis, Urban Agriculture refers to the small-scale agricultural production of foods, fruits and vegetables, within an urban centre boundary, excluding livestock and animal husbandry, which are beyond the scope of this study. Urban farming is practiced for income-earning or food-producing activities. It contributes to food security by increasing the availability and amount of fresh vegetables and food people living in cities.

Urban greening: This refers to the planting of vegetables, flowers, trees or shrubs in or around a city. Individuals, communities or municipal authorities may administer it. It is also considered a part of urban agriculture activities.

1 CHAPTER 1: INTRODUCTION

1.1 ABSTRACT

The argument and position of my research is that the attainment of larger global goals such as poverty alleviation, food insecurity, gender equality and sustainable development can be achieved by applying small-scale initiatives in a flexible, yet structured multi-disciplinary approach to urban environments. This emerging paradigm maintains that a hybrid solution is necessary to combat the complex urban challenges existing in the developing world. The approach encompasses clear-cut activities with tangible practices and clear modes of thinking. From an urban planner's view, the research explored what that development paradigm could be, and how it might realistically be carried out in an African setting.

The focus of the thesis is on urban poor women since they are the most affected by poverty. Their empowerment, participation and response to urban poverty are thus incorporated in a demonstration study on one site in the city of Nairobi, Kenya. The subsequent research embraced the emerging discipline of Urban Agriculture (UA) and merged it with urban development planning. This was done by assessing a practical manner in which a development approach for urban poor women could be achieved and implemented. Urban agriculture is key to the survival of poor women. The demonstration study was designed to address food insecurity problems experienced by women from Nairobi slums. The research highlights the effectiveness of UA as a viable means for improving poor women's access to food while simultaneously improving and greening public open spaces. Through the four week study, a team of six slum women were given the opportunity to grow horticultural produce on a roundabout. The project aimed to develop a sustainable and workable community response that could continue to be carried

out by the women themselves and in a small way, provide food security. The research objectives were to increase women's incomes, build self-esteem and improve an open city space. Importantly, the thesis also reflects on and assesses the participatory design processes used to engage the women.

1.2 PURPOSE AND SCOPE OF THESIS

This project draws on expertise and literature from various disciplines including social sciences, health and, microeconomics, community development and planning. The process, through which these theories inform issues related to gender and development planning are crucial in bridging the increasing chasm between theory and practice.

One of the assumptions of my thesis was that the city of Nairobi could be renewed through sustainable urban agricultural/greening practices, carried out by the urban poor, mostly urban women. Given that the climate in Nairobi is favourable for most agricultural production, the working assumption was that the urban poor – if supported through education of new technologies, opportunities for self-sufficiency and income generation, and perhaps temporary secure tenure – could be agents of alleviating poverty and thus making the city a better living environment. The sample comprised urban women farmers from existing slums or squatter settlements. They were drawn from an established women's group whose activities in urban farming were practised primarily in Nairobi slums.

My thesis looks at how lessons from my demonstration study can address urban poverty in developing contexts. This research was short-term and involved a limited sample of participating women and one small site. The subsequent contribution and results achieved would have to be replicated over a longer period of time and on multiple

intervention areas with more women, in an attempt to measure the tangible impact of this type of demonstration study.

1.2.1 GOALS AND OBJECTIVES

Nairobi, Kenya's capital was the choice city for this research project. The city has over three million inhabitants, and varied complexities of poverty, space and culture. The city's Central Business District is more economically advanced than in most African cities. My research fits well with the City Council's objectives of improving the environment through improvements to infrastructure and through beautifying open public spaces. This is because of the dual purpose of the research which was to provide urban women with a source of income as well as landscaping a city space.

The main objective of the study was to improve the urban environment with the participation of urban slum women in a roundabout in the city of Nairobi. The demonstration study aimed at achieving the following goals:

1. Re-green and improve the image of an open city space with functional plants.
2. Empower urban women by training them in gardening and landscaping practices.
3. Raise public awareness about the accessibility of locally grown foods for subsistence needs and marketing.

1.2.2 KEY RESEARCH QUESTIONS

From the above mentioned objectives, three underlying research questions compelled the research project to address women participation in addressing food aspect of poverty. These research questions were:

- 1) Given the complexity of poverty and social transformation, how can women-focussed research, programs or services – in combination with holistic development approaches – effectively alleviate poverty in African countries?
- 2) What role does Urban Agriculture play in Third World development, in the face of increasing urbanisation?
- 3) How can urban planners in the developing world successfully create and adopt inclusive sustainable development paradigms that meet the needs of the most vulnerable members of society – women, and by extension, children?

1.3 RESEARCH METHODS

The study used qualitative research methods as suggested by Lofland (1993) and Guba & Lincoln (1989, 156-183). In the first phase of the study, semi-structured interviews were the main method, while in the second phase a case study of a demonstration study explored the research questions posed. A final focus group was then conducted in a local school in the slum. This celebratory event was a podium for participating women to share lessons learned in the research as well as to generate recommendations for future projects. Video documentation was applied throughout the study, and it was used as both a visual reminder of the project and as a disseminator of research results. Other relevant participatory tools taught in the classroom such as oral presentations, briefings and the use of graphic images were also applied. For a detailed account of the research process, and methods, please refer to Chapter 5, Demonstration Study, on pages 65.

Despite the fact that I am Kenyan, and am fluent in *Kiswahili* the country's main language, I encountered several communication barriers when administering the

interviews. The main difficulty was that some of the words used in my research – e.g. urbanisation, gender development and demonstration site – do not have direct translations into Kiswahili (Refer to page 72). I have included my methods of overcoming this in Chapter 7, Section 7.2 pages 132 - 134.

The research methods used for the thesis research are summarised below.

Phase 1: Semi-structured interviews with women in Nairobi slums

The study first began with initial site visits to Kibera, Maili Saba and Mathare slums in Nairobi so that through observation, I might be familiarised with the peoples, physical conditions and planning issues in context. In order to explore the degree to which female urban poor were in favour of urban greening/agricultural practice in the city of Nairobi, I administered semi-structured interviews to female farmers selected from various slums in the city (See results in Chapter 5, Section 5.3.1, pp. 74 - 88). The randomly selected sample of women included urban farmers and small scale entrepreneurs. These interviews were also administered to an established self-help women's group in one of the larger slums. This women's group eventually became the main contact in the slum. Interviewees interested in participating in Phase II of the study were noted and briefed on the next steps.

Phase II: Demonstration on one Nairobi roundabout

In this phase, the goal was to implement the re-greening agricultural practices in a demonstration study pursuant to the approval of the Nairobi City Council. The process began by meeting Nairobi City Council officials in the Department of Environment and Planning who administrate all open public spaces, including roundabouts, among other areas (See Chapter 5, Section 5.3.2, p. 89). After meeting with the Assistant Head of the department informally in early January 2003, I was invited to write a letter of intent

stating my research objectives. Long negotiations were made with various City Council officers from both the Environment and Landscaping departments. I must note that I was not referred to the City Planning Department, since the research permit I was seeking was issued by the previous departments.

The letter was addressed and copied to the Town Clerk, the Director of City Planning and the City Engineer. I attached my thesis abstract as well as my Major Degree Project proposal which had just passed Ethical Review at the University of Manitoba late December 2003.

Before I received approval, I met with the Director of Environment who offered to deploy his staff to assist me in locating a suitable roundabout for the demonstration study. It was at this meeting that the director suggested to reconsider planting food crops due to environmental and pollution concerns. It was in this meeting that I was asked to avoid planting food crops at all costs! Not wanting to see my research proposal killed, I quickly negotiated to include medicinal and herbal plants.

His supportive staff assisted me in selecting the Adams Arcade roundabout based on the following criteria:

1. Visibility and notable need of upgrading
2. Accessibility by all research participants
3. Accessibility to a constant water source
4. Adequate sun exposure and limited wind
5. Security and safety

More details about the process of selecting suitable roundabouts as well as the designs are explained in Section 5.2, Chapter 5, pp. 66 and designs, Appendices page 159-161.

A letter of approval was sent to me on January 30th, 2004. Preparations for designing the demonstration began the first week of February. During this week, I made

several site visits to the Agricultural Show Sites for innovative practices. It was there that I saw how I could use a multi-storey kitchen garden (see page 160). It was a land and water consuming gardening technique and would serve as a centrepiece in the roundabout. I was also taken on a short afternoon trip on February 3rd, 2004, to a council-run nursery where a landscaping designer took me round to see the various types of medicinal plants that I could include in the designs. I also identified a nursery near the site where I purchased majority of the herbs, medicinal plants and flowers for the demonstration study.

The year 2003 being the country's 40th year celebrating independence, the roundabout site was designed and based on this patriotic theme. Four semi-circular garden patches were planted with flowered sections intercropped with strips of low ground herbs and medicinal plants (see Table 1 below & Appendices page 159-161).

TABLE 1.
CROP VARIETIES FOR THE DEMONSTRATION STUDY AT ADAMS ARCADE
ROUNABOUT.

Herbs	Medicinal plants	Flowers
Rosemary	Euphorbia	Lantana
Lemongrass	Cactus	Rose bush
Parsley	Jerusalem Thorn	Golden durata
Lavender	Iuka-sisal	Santolina
Sage	Aloe vera	China grass
Mint		Arabica

The central government, through the Ministry of Agriculture, trains technical assistants and sends them periodically into rural and urban farms to share innovative agricultural technologies and practices. Two of these *extension workers* volunteered to assist me in my research. These women assisted me in administering semi-structured

interviews in the slums, defined what crops to grow and helped in identifying potential sources of seedlings and plants. They also taught the women how to build the multi-storey kitchen garden – the same as the one I had seen in the Agriculture Show Site. This became the centrepiece of the entire design but not without accompanying physical and social problems (See Chapter 7, Section 7.1.5 page 133).

By the end of February 2004 the entire roundabout was re-greened with medicinal, herbal and horticultural crops (See Appendices page 159-161).

On March 14th, 2004, a post-evaluation focus group was held at a local elementary school in the slums. Research participants prepared a wrap-up dance with their friends. This became an excellent opportunity for me to acknowledge the work the women achieved and to discuss the possibility of addressing food insecurity through similar demonstration projects. Among other ideas, the women aired their views and shared lessons learned during the research. Focus group recommendations collected from the women are summarised in Chapter 7, Section 5.1.8: pages 80 - 82.

All site activities and participatory approaches were recorded via video documentation. This twenty-minute video served as a visual reminder of field work activities done. After I returned to Canada in March 20th, 2004, I used it to disseminate research results.

1.4 SIGNIFICANCE OF THE RESEARCH

My research contributes to existing urban planning literature, food security and on literature on women's survival in slum areas. It was an attempt to address their food insecurity and income generation aspects of poverty stemming from rapid urbanisation of the city of Nairobi. With increases in rural migration, the numbers of jobs available are

on the decline, and therefore meeting human basic needs will continue to be beyond the reach of the urban poor. With the lack of secure tenure, available land and adequate incomes, the numbers of urban poor are sure to rise. Coupled with this are increasing pressures on the environment to meet food needs. With this in mind, what is the response from the planning professionals and municipalities in addressing the immediate basic needs in such a developing country as Kenya?

The challenge of high growth urban agglomerations will be in making them sustainable environments in which the majority of the population has access to basic municipal services, credit, land and food. As urban areas are encroached upon by increasing populations, city governments will be forced to devise creative ways of managing sustainable environments. This involves multi-disciplinary and holistic approaches to integrate infrastructure provisions, economic development, environmental and slum upgrading and food security, among other urban issues.

It will also mean that sustainable cities revert to “soft technologies” to empower individuals financially, socially and nutritionally. Urban agriculture is one of those activities compatible with other urban land uses. I am convinced that encouraging and including the urban poor as an active labour force in promoting urban developments which have urban agriculture components, could very well reverse the deleterious effects of urbanisation in Least Developed Countries (LDC’s).

For instance, participants in this study were empowered to provide for their own needs by getting involved in a small-scale urban improvement project. Educationally, they learned simple agricultural and gardening techniques. As a result, monies earned from participating in this venture were used to augment their incomes for both food and

non-food expenses such as education and health (Refer to participants comments from focus groups in Chapter 5, Section 5.4, page 82).

The project benefited both participants and also municipal authorities involved. The Nairobi City Council's Department of Environment and Planning, that authorized the demonstration study, was encouraged and educated about alternative and creative sustainable approaches to re-greening streets and roundabouts in the city. Undoubtedly, the long-term goal would be the inclusion and acknowledgement of urban agriculture as an essential part of legislation governing slum upgrading programs and downtown renewal in developing countries. At most, the City Council was steered in the right direction by affirming that tangible, yet positive impacts of urban environments were a possibility. However, it must be noted that only a stable municipal government that encourages continuity of policies and legislation regardless of government party shifts.

1.5 BACKGROUND

How can we make our cities sustainable? From the 18th to 20th centuries, philosophers, architects and planners pondered over the connection between the built and the living environment. Great minds such as Claude Ledoux, Ebenezer Howard, Lewis Mumford among others, envisioned the city of the future with interconnected transportation, mid-dense housing and city centres surrounded by an agricultural or Green Belt to safeguard the urban micro-climate and provide a source of produce for city residents (Lucey, 1973, 4).

Today, these ideas are shelved due to the increasing pressures associated with urbanization in both the developed and the developing world. With land values increasing in metropolitan areas, municipalities are rather reluctant to use core diminishing land for

parks, playgrounds or green spaces. Global economic competition demands that those parcels of land be used for influential corporate ventures whose investments materialize themselves in the city as steel and concrete towers.

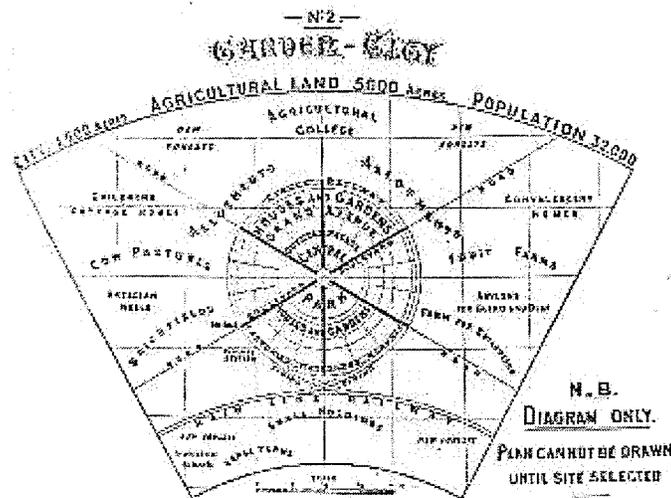


Fig. 1 Sketch drawing of Ebenezer Howard's Garden City (Source: *Garden Cities of To-morrow*, 1902 edition, page 113 in Norman, 1973, 4).

As discourses on sustainability and social equity emerge however, there is a valid concern for municipal governments to make their capitals and towns liveable places with well-connected transportation routes, adequate housing and recreational spaces and friendly city environments. Greening the city is becoming a priority for improving the standard and quality of life for city residents. Neighbourhood improvements and cleanups are now moving to city streets and boulevards, as evidenced even in cities such as Nairobi. These public-private partnerships are now emerging with tangible results to the delight of many city residents. Examples of such city renewals include Vienna's renovations of housing and parks; Spanish Greenways along railway lines in Brazil (Best Practices Database, 2003); Downtown Community Policing in Johannesburg, South Africa (NCBDA, 2003); and public-private partnerships for improving the City of

Nairobi in Kenya, are just a few places where a major emphasis is being placed in improving their Central Business Districts through sustainable design (NCBDA, 2003).

Urban agriculture is increasingly recommended as a way forward for sustaining cities by academic elites, practitioners and communities. Although city by-laws may prohibit the growth of agricultural produce in the city centre, there are ways of facilitating this practice in land use planning. Urban greening, a vital aspect of urban agriculture, is thus a viable means for making our cities both attractive and functional. Undoubtedly, countries such as Cuba and Argentina have been able to be self-sufficient in their food supplies for all members of society due to stringent urban agricultural policy (Rosset & Bourque, 2002, xiv).

This project focuses particularly on urban poor women as major participants in re-greening a site in the city centre in Nairobi, Kenya. In the developing world, women often bear the burden of raising children and providing for large households in harsh economic times characterised by high unemployment rates and poverty. Women and children also comprise the majority in city slums, with inadequate infrastructure and lack of secure tenure. In a survey conducted in 1985, 27% of Nairobi households engaged in urban agriculture, and women comprised 62% of this group (Lee-Smith & Lamba, 1998, 29). Many women sell their produce on designated city streets in the city centre, or find day jobs to earn a living. However, others walk the streets panhandling and begging for money, and use the street as a source of livelihood. Although resourceful, their micro enterprises are often regarded as a nuisance especially when they occur in downtown areas. Consequently, rehabilitation programs in Nairobi have been established to accommodate these women and idle street children (Muganda, 2004).

This project was also open to including these same women so that they can be identified and empowered to work not only for the city and improve the city streets through gardening and landscaping, but also earn an honest living.

1.5.1 LIMITATIONS

Bureaucracy and existing attitudes regarding urban agriculture curtailed the initial objective of the project, which was to increase the accessibility of local vegetables for urban poor women. Although the use of public land for agriculture in the city centre, as written in the Local Government Act, is prohibited, the activities are common to many roadsides, riversides and railway lines. The demonstration study was designed in part to challenge this prohibition. Despite official bylaws restricting agricultural crops, the city did allow the team to include herbs and medicinal plants for the landscaping work. This is a great leap in terms of acknowledging that the open spaces can be put to better use for horticultural production. This shift to urban greening fits in well with the City's upgrading programs. However, some City Council departments are not keen on formalising urban agriculture within the city boundaries. This attitude has to do with the misconception that urban agriculture is a 'backward' venture that is incongruent with modernising a city.

Other limitations included limited access to water supply, crop diseases, possible air pollution, vandalism of plants and the lack of accurate demographic data on socio-economic aspects of persons living in slums. Finally, financial limitations and lack of ongoing funding made it impossible for me to sustain the project. The women who had volunteered for the project reduced their visits to the site and thus the great design and garden work achieved began to disintegrate. I hoped the women, would continue the

project. It became apparent however, that women living in the slums have other immediate pressing needs of providing for their households, rather than volunteering for a project in which the researcher was long gone. I feel that a long term strategy could come out of this study, so that the project would live on beyond my initial inquiries.

1.6 OVERVIEW OF CHAPTERS

Chapter 1 serves as an introduction to the underlying ideas behind my research. This summary introduces the reader to the problems and research questions that shaped the thesis project. It also highlights the scope and limitations of the research project.

Chapter 2 sets the stage by looking at Nairobi's historical background during the colonial era. A synthesis of the political, economic and social challenges that arose at the time help frame the constraints on effective planning of the municipality's urban centre.

Chapter 3 explores theoretical development paradigms practitioners are using in Southern African states. This work greatly influenced the way research was undertaken. It also places the project within the context of sustainable urban development in an increasingly globalizing world.

Chapter 4 offers a comprehensive literature review and focuses on three key areas: women empowerment and African development; Urban agriculture and Third World development and lastly, projects highlighting urban agriculture in relation to gender. Lessons learnt from these initiatives strengthen the ideas behind a holistic development paradigm.

Chapter 5 documents my research activities done at a demonstration site in Nairobi, Kenya with six women from a Nairobi slum. This chapter extensively describes

the demonstration study planning including research methods used, the reasoning and means of achieving research objectives.

Chapter 6 is an evaluative and critical analysis of the participatory planning process through which the fieldwork was undertaken. This assessment uses seven analytical frameworks for participatory planning to examine the extent to which the process was inclusive and engaging of the participants. As a means of analysing the findings, the study is reviewed and compared against the development paradigm and theoretical background discussed in Chapter 3.

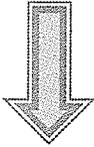
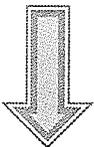
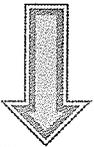
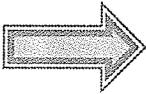
Chapter 7 is the concluding chapter in which I reflect on the thesis' role, contribution and purpose. This chapter assesses the methodology used in this study by discussing lessons learned, fieldwork experiences, findings and answers to research questions, post-evaluation results and, ideas about what I would do, "*If I Had To Do It All Over Again...*" The thesis ends with directions for further research on an action-oriented people-centred development paradigm for planners working in the developing world.

1.7 SUMMARY: THESIS CONCEPT

This thesis begins and ends with the concept of poverty: how it develops who it affects, how it manifests itself, and how planners can address it particularly in the developing world. The definitions and origins of poverty date back to pre-war years, but the daunting factor is that since 1948 to date, poverty continues to be the one concept around which most multi-lateral and bi-lateral projects are organised (Escobar, 1999, 384). However, few, if any organisations or governments have worked out strategic programming for reaching the central target of development – people.

The following flow chart and problem tree summarises my thought processes and rationale for addressing poverty in women.

TABLE 2.
THESIS CONCEPTUAL CHART AND PROBLEM TREE

<p>POVERTY</p> 	<p>Poverty occurs as a result of one or a combination of the following:</p> <ul style="list-style-type: none"> • <i>Structural Adjustment Programs imposed by IMF, World Bank</i> • <i>Natural disasters (drought, famine, earthquakes, diseases)</i> • <i>Unproductive and slow economic growth</i> • <i>Poor Governance (corruption, mismanagement of funds)</i>
<p>EFFECTS</p> 	<p>Poverty's effects are evidenced in social problems such as:</p> <ul style="list-style-type: none"> • <i>Homelessness sparks squatter settlements</i> • <i>High unemployment rates thus increase in crime</i> • <i>Poor infrastructure, and unpleasant living environments</i> • <i>Food insecurity</i>
<p>PEOPLE</p> 	<p>In developing countries, the people most affected by poverty are:</p> <ul style="list-style-type: none"> • <i>Women and young children</i>
<p>HYBRID SOLUTION</p> 	<p>The thesis addresses some of poverty's effects. Its objectives are:</p> <ul style="list-style-type: none"> • <i>Re-green and improve an open city space</i> • <i>Partner and collaborate with urban slum women in the project</i> • <i>Increase accessibility of local foods and vegetables for women</i>

This flow-chart displays the various aspects of poverty, how it affects people and the hybrid solution that I have proposed. In no way does my thesis address all impacts of poverty. However, through the research, particularly the demonstration study, I addressed physical improvement of the roundabout space, I engaged women in meaningful work,

and improved their food security, through knowledge and skills transfer for a short period of time. Admittedly, this type of research would have to be conducted over a longer period of time (3-5 years) in order to measure lasting impacts on women's lives.

2 CHAPTER II: HISTORICAL BACKGROUND

2.1 NAIROBI'S COLONIAL HISTORY & URBAN DEVELOPMENT

Nairobi became a colony of the British government in the late 19th century. The land on which Nairobi grew was initially a livestock watering point for the *Maasai* pastoralists who grazed their livestock seasonally on the land. The name, Nairobi, is a Maasai phrase meaning, "The Place of Cool Waters." In 1892, the Kenya Uganda Railway (KUR) authorities began the construction of the Kenya – Uganda railway which began at the east coast in Mombasa, and ended in the western town of Kisumu. When the railway reached the watering point in 1899, a small transportation storehouse was established for storing oxen and mule supplies. Later that year, the KUR made the site its primary headquarters. Nairobi thus became a commercial and trading centre. Some of the features that made it favourable for relocation included two sources of freshwater rivers, a higher and cooler altitude, which meant there were fewer tropical diseases, and rich fertile soils towards the west which was ideal for residential housing construction (Lee-Smith & Lamba, 1998, 1; Obudho, 2000, 4).

By 1906 the original railway stop had grown into an urban centre with over 10,000 people. There were also definite land-use zones which guided development, although some of the settlement patterns were not actually planned. It was during this growth that the spatial segregation in residential housing became evident. Europeans occupied the cooler west lands, the Indians (who assisted in the construction of railway) settled in the north, while the African labourers settled towards the east (Fig. 2).

“The physical representation of the city of Nairobi based on the British model and garden city plan promoted the stratification of residential development on the racial basis... The colonial rulers regarded the Africans as temporary sojourners in the city of Nairobi. It was thought that the provision of extensive public housing would encourage influx of Africans...resultant to increasing criminal activities and diseases” (Obudho, 2000, 20).

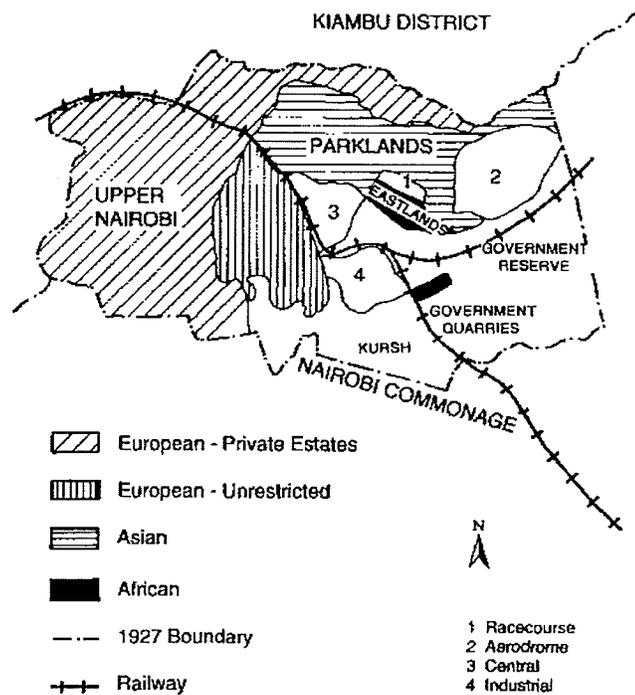


Fig. 2. Nairobi's residential racial compartmentalisation (Obudho, 1997).

With the completion of the railway line and the continued arrival of more non-Africans, the settlement expanded rapidly. By 1962, Nairobi's ethnic representation was 10% European, 30% Asian and 60% Africans (Lee-Smith & Lamba, 1998, 1). As the city experienced economic boom, more Africans migrated from the rural areas being pushed by the expropriation of land – the basis of their livelihood – into towns in search of employment opportunities. Most of these rural-urban migrants were male labourers who left their families to farm in small rural towns. For this reason, Nairobi's population was predominantly male as census data reveals between 1948 and 1989 (Obudho, 2000, 9).

However, the ratio has since been normalised with a more balanced gender representation.

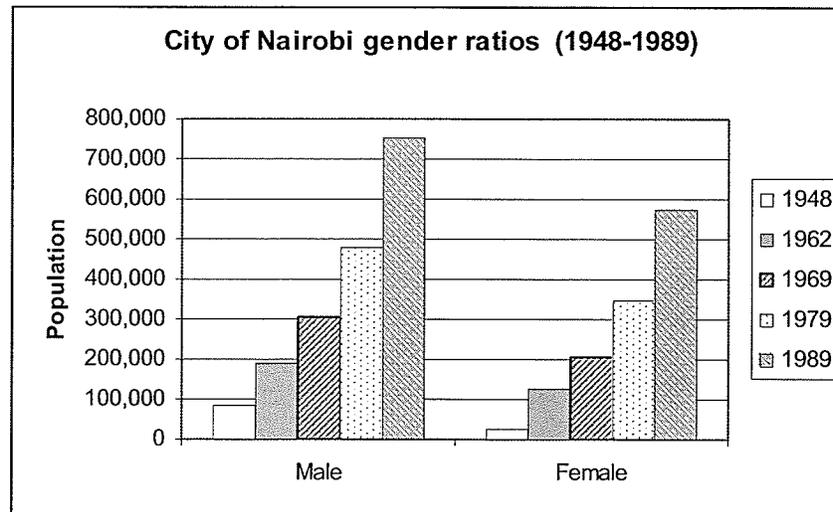


Fig. 3. City of Nairobi gender ratios from 1948 - 1989 (Obudho, 2000, 9).

In 1919, when Nairobi became a municipality, the city became an important administrative and commercial centre in the East African region, welcoming a lot of investment through the manufacturing industry. By 1950, the town had achieved city status, and began garnering its reputation as a major tourist destination. Between 1940 and the early 1960's, violent political demonstrations by the Kenya Land Freedom Army commonly called the *Mau-mau*, occurred in the country. The motivation behind the rebellion mostly by the Kikuyu ethnic group was for the liberation of land from colonial powers and to put incessant pressure on the British to make Kenya a self-governed state and to free European held 'white highlands' – the most fertile and productive land – back to the control of native Africans. This movement was later countered by the State of Emergency declared in 1952 (Lee-Smith 1998, 2).

By 1957, the Nairobi City Council constituted of three nominated African councillors as compared to 30 European and Asian councillors. However, by 1959 with

independence looming, the NCC had increased to four African councillors. The first African mayor, Charles Rubia, was elected to the council in 1959. (Lee-Smith & Lamba, 1998, 6).

Kenya's journey towards freedom and national development commenced when she gained independence from the British in 1963. With a renewed sense of pride and autonomy, Africans took over the affairs of government, such as infrastructure development, public housing and land administration, which were previously under colonial regime. However, the enormous task of developing post-independence Kenya was a challenging and daunting experience for the newly elected municipal council. The dual cause of this was population explosion coupled with the city boundary expansion from 91 to 684 square kilometres:

“After independence in 1963 the rapid expansion of Nairobi's population as a result of population migration and boundary extensions made this plan [the Nairobi Master Plan of 1948] obsolete...Most of this [area] was completely unserviced while even the areas within the old boundaries were unevenly serviced, with many places still using septic tanks or pit latrines rather than the town sewer” (Lee-Smith & Lamba, 1998, 7).

This jurisdictional upsurge largely exceeded and overwhelmed the councils' capacity – human, technological and financial – to provide basic municipal amenities to its residents as well as to respond to urbanisation issues such as poverty, inadequate housing, congestion and poor infrastructure. This increasing rate of expansion is the major cause of sprawling slums in the city of Nairobi (Lee-Smith & Lamba, 1998, 7, 12).

By 1989, the population in the urban centre hit 1.3 million, thus putting more and more pressure on the environment for housing, basic amenities and food supplies (Fig. 4). In some parts of the city, population densities increased up to 26,000 per square

kilometre. The process of urbanisation thus began taking root in the small city with many enterprises from the rural towns relocating to it.

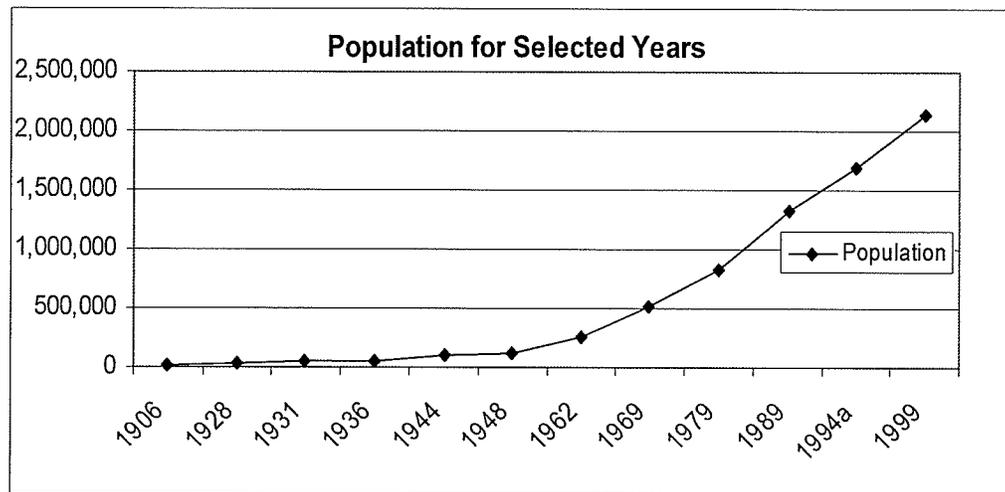


Fig 4. Nairobi's population growth from 1906 to 1999 (Obudho, 2000, 7).

Upon realising that the city was becoming overcrowded, the government developed strategies aimed at decentralising industrial and manufacturing activities to other satellite and mostly rural towns near the city, and hence, re-distribute the population as well as incomes more proportionately. These programs discouraged rural-urban migration through creation of tax incentives, restrictions on investments and demolition of slums and squatter settlements (Obudho, 1997). Regional development also became a priority with increased linkages between Nairobi and adjacent districts. The government built transportation networks to encourage more investment to these areas. Furthermore, investments for an integrated rural development plan were implemented. Such programs assisted rural farmers with agricultural input for maximising food production and for attracting large investments. However, despite the implementation of these policies, the government was unable to control the population in the rapidly growing city. To date, all these policies have become obsolete (Obudho, 1997; 2000, 10; World Bank, 2000, 44).

2.2 GENDER & FOOD SECURITY: IMPLICATIONS FOR HUMAN SETTLEMENT

Virtually all sectors of Nairobi's urban development have been affected by increasing urbanisation and an increase in population. The proliferation of slums and squatter settlements are most obvious results of this, and are prime study areas requiring urgent legislative and environmental attention. Congestion in these areas as well as poor sanitation, lack of infrastructure, and basic municipal services, renders slum dwellers, particularly children, prone to myriad diseases, such as diarrhoea, intestinal bacteria, influenza and skin infections. Among adults, the most common diseases are sexually transmitted disease, such as HIV/AIDS which has reduced life expectancy to 45 years (Obudho, 1997; 2002, 23-27, 32).

In most slums, the majority of the population lives on less than a dollar a day. Inflation rates rise month after month and a stagnant economy means that employment opportunities are scarce. It is therefore not surprising that many families are unable to meet the basic amenities needed for a decent quality of life. Food, the most basic one, is difficult to access. Since food prices in grocery stores or in farmers' markets are too steep for slum dwellers, a significant number revert to small-scale agricultural production along roadsides and riversides within or at the city periphery. These activities are considered illegal according to existing city by-laws and producers are often subject to harassment and evictions. Women are mostly the ones left with the responsibility of providing food for their households; therefore, they are the tenders of these urban farms and gardens. Apart from the physical labour and stresses of farming, they are also prone to HIV/AIDS infections and other diseases, violence and domestic abuse. These factors can be traced to

a powerlessness derived from low literacy levels, outdated cultural practices, unfair gender-based division of labour and a lack of access to institutional support for gaining control over their income resources (Sparr, 1994, 18).

The table below summarise the empirical impacts of Structural Adjustment Policies for women in developing countries. Urbanisation problems in many of these countries are traced back to these policies thus, identifying their gender implications are paramount to understanding the problem women face and continue to face in the developing world. In the nineteen eighties, when many men lost their jobs due to government cutbacks and retrenchment, what happened to African women in general?

TABLE 3 - IMPACT OF STRUCTURAL ADJUSTMENT POLICIES ON WOMEN

EFFECT	ISSUE
Health and Safety	- Women experience domestic violence, mental health problems and stress. These affect fertility and decrease women's mortality
Education	- Cultural biases limit education access for the girl-child – she is forced to attend to household chores and often did not join her brothers in school. - In some countries, women are chronically anaemic due to practices such as eating little and last before men and boys
Income & Employment	- Women seeking income-generation face unfavourable working conditions e.g. wages differences and labour laws
Culture & tradition	- Women in many cases have few if no land rights or homeownership.
Access to public services, information & financial resources	- With limited education, women have restricted access to economic institutions that provide skills, training and support for economic independence.
Marital status and marriage decisions	- Even though many households are now women-headed, it is the men who get to spend the money.

Source: Adapted from Sparr, P. Sparr, Pamela. Ed. *Mortgaging Women's Lives: Feminist Critiques of Structural Adjustment* (New Jersey: Zed Books Ltd., 1994) 20-29.

2.3 SUMMARY

This chapter sets the stage by tracing the urban development of Nairobi from its humble beginnings as a grazing land to the burgeoning metropolitan city it now is. Urbanisation, a rapid population increase, and a vast land (boundary) area have meant that the municipal authority is unable to provide its residents with basic amenities for a decent quality of life. The urban poor are forced to live in dilapidated slums and squatter settlements where they are prone to diseases. Poverty is so rampant that access to food is limited to illegal farming since most are unable to afford food from markets or grocery stores. Despite the government's interventions of discouraging congestion by decentralising activities to satellite towns near the city, the population has continued to increase.

In this chapter I also highlighted some of the impacts that urbanisation and economic policies such as the SAP's affected women. The complex nature and pattern of historical development reveal that a fine-tuned intervention is needed to address the root causes of poverty. How can the government reinforce programs in preparation for future development, and simultaneously, address the immediate short-term needs of the poorest people, particularly women?

Chapter 3 discusses development theories underlying the thesis and proposes a "people-centred" framework that actively relies on civic engagement as one means of improving the lives of the disadvantaged. This represents a shift from the dominant mindset among development practice, which is mainly driven by top-down approaches to economic development. The main premise of the people-centered development framework is that much is gained from working *with* people, and not just *for* people.

Secondly, I link this people-centered development paradigm with post-modernist planning theory on participatory planning. These theories are further discussed in Chapter 6 where I analyse the demonstration study's planning methodologies.

Lastly, the chapter looks at current sustainable development in some countries whose simple innovative solutions integrate urban management, poverty reduction strategies, and gender focus through enabling legislation.

"The basic purpose of development is to enlarge people's choices...People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms and sense of participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives."

- Mahbub ul Haq

3 CHAPTER III: FOUNDATIONAL THEORETICAL UNDERPINNINGS

In this chapter, I look at the meanings of development that practitioners use in project planning in African cities. Firstly, the emerging people-centred paradigm adopted by South African development professionals is referenced due to its applicability and relevance to urban planning within the region. Secondly, a discussion on participatory planning as it emerges from the debate between rational and collaborative planning will be discussed. Thirdly, a brief discussion about what constitutes sustainable urbanisation, its origins, concepts and challenges follows, to show that, in reality, the enormous task of achieving sustainability would produce more results if it was supported, nationally and internationally, from a bottoms-up approach.

The underlying theoretical premise is that cities that strive for sustainable development in the developing world need to engage civic participation that is people-centred, pro-poor, and in most cases, women-focused, in order to effect change for the lives of *all* urban dwellers regardless of race, gender or income.

3.1 A PEOPLE-CENTERED DEVELOPMENT PARADIGM

After World War II, development literature depicts how development theories hinged on the alleviation of chronic poverty and decaying social conditions in developing countries. Development in the 1960's would be understood through modernisation and dependence theories of the 1960's. These theories were based on the assumption that economic growth of the world's least developed nations was synonymous with automatic development and prosperity.

Industrialisation and urbanization were seen as the inevitable and necessarily progressive routes to modernisation. Only through material advancement could social, cultural and political progress be made...It was absolutely necessary that governments...take an active role in promoting and orchestrating the efforts to overcome general backwardness and economic underdevelopment. (Escobar, 1999, 383).

However, those who attempted to implement these modernization policies in developing countries failed at equalizing development to *all* people. Oversights such as the unequal distribution of land, incomes and gender-specific division of labour, coupled with widespread corruption contributed to these misguided policies. In some societies, women were side-lined and ultimately lost in the development and modernisation processes (Sparr, 1994, 26).

When a person talks about development, what meaning comes to mind?

According to South Africa's Community Development Resource Association (CDRA), mainstream development practice is heavily influenced by modernisation theory which tends to focus on doing things *for* people and not necessarily *with* people. These activities involve provision of infrastructure, information transfer, resource allocation, political and economic analyses and interventions (CDRA, 1998, 2).

These have all been done – at their best – on behalf of the “marginalised and dispossessed.” The idea being that action on the environment – or context – within which people live constitutes development as such, as well as enables the development of people” (CDRA, 1998, 2).

This development model frequently assumes that one partner has superior knowledge and expertise, and therefore has a moral obligation to assist the lacking and receiving partner.

“In short ... we (practitioners) can intervene from the outside ... and create development ... without necessarily being affected ourselves” (CDRA, 1998, 8). Such development has focused almost wholly on people's environment and not on the participating people themselves.

Development was – and continues to be for the most part – a top down, ethnocentric, and technocratic approach that treats people and cultures as abstract concepts, statistical figures to be moved up and down in the charts of ‘progress’... It comes as no surprise that development became a force so destructive to third world cultures, ironically in the name of people’s interests (Escobar, 1999, 384).

This conventional approach and meaning of development is currently being challenged by development practitioners working on development projects in South Africa. The Community Development Resource Association (CDRA) has developed a “people-centred development” which focuses on building the capacity of people.

It is not primarily about providing advice or (material) resources, or about organising structural and policy changes, but about working facilitatively alongside people so that they may enlarge themselves and thus gain their own capacity to exert authority over their own lives and futures (CDRA, 1998, 2).

This people-centred paradigm encompasses four components:

- 1) The elements of human warmth and integrity that are the basis of trust,
- 2) By observation and dialogue, assisting people to understand themselves,
- 3) Facilitating a flexible development process in order to productively change – or perhaps develop people, and

4) Grounding new and emerging changes so they are stable and have a sense of security (CDRA, 1998, 4-7).

The sequence of this approach is fluid and the entry points for the development process are therefore varied depending on the nature of the problem being addressed. This fluidity and methodology offer 'safe space' where people face the challenges of development practice. Here, "*...people can move, risk, experiment and recreate images of themselves and of their relations hips with others, and with their environment*" (CDRA, 2003, 23). In essence, people-centred development free's people – and in my thesis, slum women – to dream.

Moreover, in order for people centred development approach to work, it must engage practitioners and communities in specific activities, practices and particular thought processes. For instance, the process supports learning "as a distinct organisational activity" through a dynamic and not linear development process. Learning then, is facilitated by an iterative development process that "*...advances in small, to and fro process of advance and retreat, sometimes piecemeal, sometimes promising*" (CDRA, 2003, 11). This process, of learning, could take years of collaboration between CDRA and the community or organisation. As the relationship builds, CDRA facilitates new methods and approaches as the group participates fully in changing practice. In this process, development incorporates active reflection on group goals and achievements.

As a discipline, development practice is responsive to certain problems and difficulties. In my research, the approach and intervention represent responses to urban poverty, gender disparities and physical/environmental management in the City of Nairobi. They allow various disciplines to merge and address urban challenges, in order to generate multiple solutions. Therefore, these tools, approaches and models involve

human change and human development. In addition, the people-centred development paradigm offers a map to guide both the participants and the researcher about where the project is and where it will go. *"We must be prepared to go through the eye of the needle ourselves, for every developmental intervention will also have its effects on the practitioner"* (CDRA, 1998, 8).

The journey, how we get there, and how people challenge their problems will facilitate this new and emerging development. In conclusion, the people centred development paradigm is firm in goal achievement, capacity building and active participation from the grass roots. By encouraging planning practitioners to come out of the rigidity of mainstream development practice, CDRA promotes fluidity and reflection in all planning processes.

Instead of trust, we find doubt; instead of warmth, we find formality; instead of collaborative endeavour, we find jealously guarded empires; instead of risking the new, we find the refuge of the known. Even while we know that the development project will fail if we do not overcome the lack of love and absence of freedom in our work, we struggle to find a way through all the reasons militating against courageous action. We are constrained by a paradox – that a development approach results in trust and warmth and freedom yet it also demands these qualities as a condition for success (CDRA, 2003, 13).

3.2 PARTICIPATORY PLANNING *IN SITU*

In this section, I briefly discuss the similarity in principals of the people-centered development paradigm and participatory planning. In Chapter 6, Analysis of the Lenses (pp. 89), I mirror these participatory principals from key authors and theorists in relation to fieldwork done prior to and at the demonstration study (Chapter 5, pp. 59).

The original concept of participatory planning is focused on people. While governments and organisations have developed policies to address poverty, these programs and services have not always been useful or meaningful to the intended people.

In developing countries, participation is not as empowering as definitions on the ladder of participation reveal. Pseudo-participation – where participants are placated, consulted and mostly dominated – is primarily the approach that tends to be most evident. Genuine participation as Sanoff describes, aims for full citizen control and cooperation in power sharing and decision making. This is ultimately what participation is about – empowerment (Sanoff, 2000, 8).

When a planner begins to conceptualise what they would like to achieve with a community, it is the simple questions that earmark true participation. Some of these questions may include – Who will be involved? What are the goals, outcomes and expectations? How will people be involved? What are the entry points for participation in the process? What impacts with the accomplishments have? Who really benefits from the process?

Planners in the developing world – who often lack human, technological, and financial capacity to do their work – need to acknowledge the tangible value of investing *in people*. I think that this is one of the most critical principals in addressing poverty at both policy and institutional levels.

Why would an African city planner go down the road of participatory planning? Sanoff suggests that there are four critical characteristics that validate participation:

“1) Participation is inherently good”, 2) That “it is a source of wisdom and information and thus improves the effectiveness of decision-making”; 3) That it is “...an inclusive and pluralistic approach by which fundamental human needs are fulfilled and user values reflected”; and 4) that “...it is a means of defending the interest of...and satisfying (peoples’) needs that are often ignored and dominated by large organisations, institutions, and their inflated bureaucracies” (Sanoff, 2000, 12).

TABLE 4
THE VALUE OF PARTICIPATION

Opening the process to stakeholders
Diversity of viewpoints
Meaningful Participation
Integrating stakeholder concerns
Information exchange
Saving time
Saving and avoiding costs
Enhancing project acceptability
Mutual learning
Mutual respect

Source: (Sanoff, 2000, 25)

In the daily workings of a professional, first, participation involves promoting dialogue from relevant stakeholders and from these discussions facilitating collective decisions and way forward. The environment in which this dialogue takes place should accommodate for free and diverse expressions of opinions make room for compromise or negotiation and promote a unified end product (Sanoff, 2000, 12). Where technology, language, education, culture or gender, manifest themselves as impediments to participation, it is the responsibility and role of the planner to seek alternative tools for engaging meaningful involvement. Addressing these inequalities and disparities however should not cloud the fact that for the most part many people – educated or not – are intellectually conversant with planning and urban issues and systems.

Secondly, the practicing professional naturally should progress into identifying participatory methods that are relevant to the program or project. One's planning skills in organisational and project planning and development may help frame the necessary background work for supporting participation:

Although citizens groups voluntarily organize to participate in community projects, the technical complexity of such projects usually requires professional assistance... Without guidance, community groups may respond only to situations of crisis and may not achieve the goals that originally united them... Therefore, the management of participatory efforts is important (Sanoff, 2000, 37).

Part of this process involves presenting the problems with clarity in order to communicate alternative actions for the environment. When goals are defined collaboratively and when open dialogues are facilitated between stakeholders, meaningful participation takes place. Some of these participatory methods may include strategic planning, visioning, charettes, community action plans etc. The next step for the planner is to select techniques that can support the participatory process. Although a wide selection of tools exist, one must sort through and identify those that help get to the heart of the problem by generating creative solutions through dialogue.

The next section discusses an additional theoretical underpinning on sustainable development. I feel that over the next decade, planners in the developing world need to merge participatory processes within sustainability concepts in order to address the urban challenges in the developing world.

3.3 SUSTAINABLE DEVELOPMENT IN AN URBANISING WORLD

The world's population between 1970 and the year 2000 rose dramatically by over 2 billion people. Urban growth that is occurring in mid- to low-income countries is expected to double by another 2 billion over the next 30 years (Allen & You, 2002, 1). Whereas in 1950 where only two cities (London and New York City) were mega-cities (i.e. with populations of over 8 million), in 1995, 23 mega-cities emerged, with 17 of

them located in the developing world. UN estimates predict that by the year 2030, there will be over 36 mega-cities, of which 23 will be found in Asia (Leitmann, 1999, 8).

If a people-centred development approach is to be implemented successfully in the developing world, it will have to operate within a sustainable development framework given the startling urban population expected. Consequently, it is imperative to discuss sustainability's origins, main concepts in urban planning and the challenges it addresses *in lieu of* the contrasting reality of these evolving 21st century cities. This section traces the development of the sustainability concept from the Brundtland Report in 1987, the Local Agenda 21 developed from the Earth Summit in 1992 and the subsequent focus on urban settlements and shelter as summarised in the Habitat Agenda 1996. I also look at how current international conventions and agreements – Millennium Development Goals, drafted and approved by 126 countries – are committed to addressing urban poverty, hunger and education *inter alia* (Allen & You, 2002, 29; UN, 2004).

As a spatial construct, sustainability is far more complicated to implement when most cities, particularly in the developing world, are entering a high-growth phase of urban transition (World Bank, 2000, 32-33). It is achievable when a balance between good governance and a bottoms-up – think local, act global – approach is propagated at the grassroots level. This dual interaction, when in conjunction with a people-entered approach, is the main theoretical basis for my thesis.

An Overview of Sustainability:

“The future will be predominantly urban, and the most immediate environmental concerns of most people will be urban areas.” Brundtland Commission (WCED, 1987, 255).

Cities entered the debate on sustainability in 1987 at the World Commission on Environment and Development, in its report Our Common Future (WCED, 1987). In the report, sustainable development was defined as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*” (WCED, 1987, 43). One of the priority areas highlighted by the Commission was “urban challenges”, such as food security, population growth, industrial production and energy efficiency. In terms of challenges facing cities, they listed environmental concerns such as water provision, adequate sanitation, waste management, affordable housing and public transportation (Leitmann, 1999, 42).

After the Brundtland report, the next event was the United Nations Conference on Environment and Development, also called the Earth Summit. It was held in Rio de Janeiro in 1992 and its main recommendations documented in the Agenda 21. This was a call to action by more than 160 countries to lean towards, and implement pro-environmental focussed development. Although the document identified some key urban problems, there was neither unifying framework nor a commonly agreed way forward specifically for the world’s emerging urban centres (Leitmann, 1999, 42).

In 1996, Istanbul (Turkey) hosted UN’s second Habitat II Conference, where both central and local governments, as well as non-governmental organisations (NGO’s) overwhelmingly endorsed sustainable urban development. They concurred that sustainability concentrate its efforts on urbanisation and its related concerns such as land tenure, housing development and urban management. At this meeting, the Habitat Agenda was created. It clearly documented the roles of cities and civic organisations in achieving sustainability with an over-riding commitment to improve living conditions through sustainable development (Allen & You, 2002, 26).

Almost 10 years later, there is slow progress to making Agenda 21 and the Habitat Agenda a reality. The world continues to urbanise at a phenomenal rate as characterised by its more urban than rural populations. As expected, most of this growth is occurring in developing countries. Therefore, cities are not only becoming engines of economic growth, they are also home to almost half of the worlds' poorest populations.

However, the task of sustaining cities for future generations through Local Agenda 21 programs has not been successful due to institutional barriers at national levels. The International Council on Local Environmental Initiatives (ICLEI) conducted a survey which showed that of the 64 countries who had developed Local Agenda 21 (LA21) environmental and sustainable strategies, only 11 countries – mostly in the developed world – had LA21 programs and campaigns (ICLEI, 1997). Thus, these countries have been unable to meet “...*the overarching principals of sustainability, liveability and equity are...goals... (and)... principals of enablement, civic engagement and multi-actor governance*” (Allen & You, 2002, 32).

Therefore, the following UN conference, World Summit on Sustainable Development (WSSD) (held in 2002 in Johannesburg, South Africa), put more emphasis on governments and civic society to scale-up and accelerate the implementation of both LA21 and the Habitat Agenda in their countries. The issues raised at the WSSD were the autonomous right of cities to raise their own revenues, to improve transparency and accountability, to encourage economic incentives for improved city function and to strengthen cities in the creation of nation-wide poverty reduction strategies (Allen & You, 2002, 29).

Subsequent UN Conferences, such as the World Urban Forum in Nairobi, Kenya in 2002 and in Barcelona in 2004, also reiterated WSSD's concerns that cities, now vastly

diverse in ethnicity, income and population, should address poverty, insecurity and environmental degradation at a local scale (Allen & You, 2002, 30). They called on international and national support for a multi-sectoral approach across all levels of government, private sectors and civic societies to address urban development issues. Emphasis was put on the implementation of Agenda 21 by starting at a micro-scale. In order to further sustain these programs and so scale them up, WSSD called on nations to execute enabling legislation and policies in order to support these strategies more strongly (Allen & You, 2002, 30).

At the dawn of the new millennium, 126 UN member states charted out the Millennium Development Goals (MDG's) for addressing global poverty.

These MDG's are the world's time-bound and quantified targets for addressing extreme poverty in its many dimensions—income, poverty, hunger, disease, lack of adequate shelter, and exclusion—while promoting gender equality, education, and environmental sustainability. They are also basic human rights... (UN Millennium Report, 2005, 1).

By 2015, these nations envisage reducing global poverty in approximately 500 million people. Although just a decade away, international and national organisations have already began making the necessary political, organisational and structural changes in order to meet the MDG's. The goals cover all the basic urban issues in the developing world (Table 5).

TABLE 5: THE MILLENNIUM DEVELOPMENT GOALS

MDG GOALS	TARGETS FOR ACHIEVING THE MDG'S
Goal 1: Eradicate extreme poverty and hunger	Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger
Goal 2: Achieve universal primary education	Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
Goal 3: Promote gender equality and empower women	Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015
Goal 4: Reduce child mortality	Target 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate
Goal 5: Improve maternal health	Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio
Goal 6: Combat HIV/AIDS, malaria and other diseases	Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
Goal 7: Ensure environmental sustainability	Target 9. Integrate the principals of sustainable development into country policies and programs and reverse the loss of environmental resources Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation Target 11. Have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers
Goal 8: Develop a Global Partnership for Development	Target 12. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (includes a commitment to good governance, development, and poverty reduction, both nationally and internationally) Target 13. Address the special needs of the Least Developed Countries (includes tariff- and quota-free access for Least Developed Countries? exports, enhanced program of debt relief for heavily indebted poor countries [HIPC] and cancellation of official bilateral debt, and more generous official development assistance for countries committed to poverty reduction) Target 14. Address the special needs of landlocked developing countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and 22nd General Assembly provisions) Target 15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term
<i>For least developed countries in Africa, landlocked and small island countries.</i>	Target 16. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth Target 17. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries Target 18. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications technologies

Source: UN Millennium Report, 2005, xviii.

How will the world look in 2015 if the Goals are achieved? More than 500 million people will be lifted out of extreme poverty. More than 300 million will no longer suffer from hunger. There will also be dramatic progress in child health. Rather than die before reaching their fifth birthdays, 30 million children will be saved. So will the lives of more than 2 million mothers (UN Millennium Report, 2005, 1).

Although the goals may seem grand, many nations are already on their way to reducing poverty e.g. many East and South Asian countries have experienced economic and social growth. However, other regions are not as fortunate (UN Millennium Report, 2005, 2):

Sub-Saharan Africa, most dramatically, has been in a downward spiral of AIDS, resurgent malaria, falling food output per person, deteriorating shelter conditions, and environmental degradation, so that most countries in the region are on a trajectory to miss most or all of the Goals. Climate change could worsen the situation by increasing food insecurity, spreading vector-borne diseases, and increasing the likelihood of natural disasters; a prolonged decline in rainfall in parts of Africa has already wreaked havoc.

However bleak this may seem for the African continent, there are proven strategies that governments can undertake in order to reach these goals. All of them have to do with political will and good governance that engages civic participants from a local level:

In many of the poorest countries, the Goals are indeed ambitious, but in most or even all countries they can still be achieved by 2015 if there are intensive efforts by all parties—to improve governance, actively engage and empower civil society, promote entrepreneurship and the private sector, mobilize domestic resources, substantially increase aid in countries that need it to support MDG-based priority investments... (UN Millennium Report, 2005, 55).

Hundreds of international development academia and policy makers are working hard to guide countries to achieve these goals. No matter how ambitious the MDG's are, they are yardsticks ensuring that global poverty is addressed from a multi-sectoral perspective. For my thesis, the three tiered theoretical underpinnings of a people centered development, participatory planning and sustainable urbanisation uphold the main

research by narrowing down and localising the empowerment of poor women in Nairobi's slums.

3.4 SUMMARY

This chapter looked at the three main theoretical underpinnings of the study: people-centred development, participatory planning and sustainability. A running theme in the three bodies of literatures is that human and urban development goes hand in hand with practical and targeted programs, policies and services in which people are directly and actively involved. The top-down mainstream development paradigm is seen as a barrier to generating civic participation. International systems, whose seemingly optimistic plans often with noble goals, are a long ways to improving the quality of life for majority of disadvantaged poor people. The core principal in this chapter highlights the importance of development and planning professionals working *with* people and not just *for* them and doing so within a sustainable development framework.

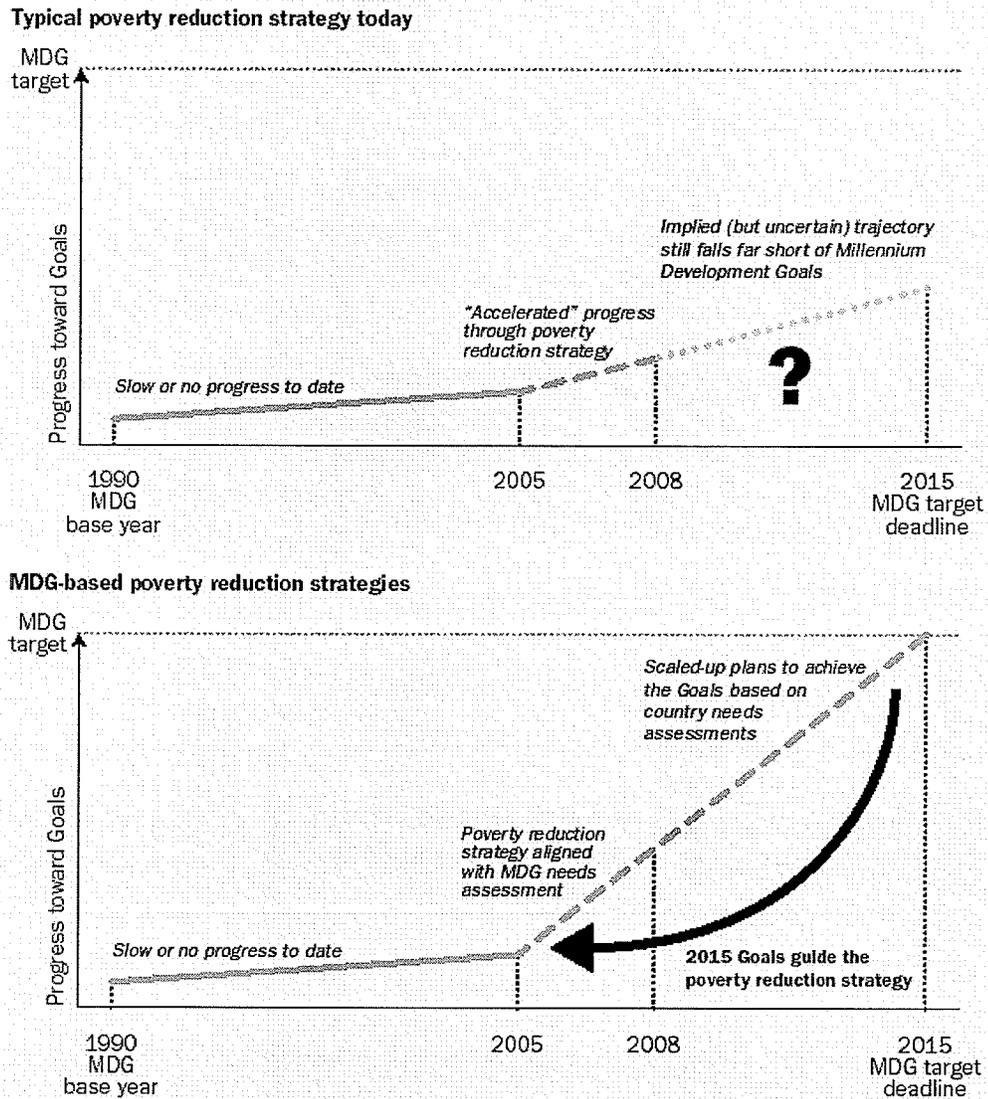


Fig. 5. Strategy to achieving MDG targets by 2015 (UN Millennium Report, 2005, 57).

4 CHAPTER IV: LITERATURE REVIEW

This chapter draws on three main bodies of literature: women's empowerment and African development; urban agriculture and Third World development and lastly a critique of case studies involving gender and urban agriculture.

4.1 WOMEN, EMPOWERMENT AND AFRICAN DEVELOPMENT

African women just like many others elsewhere in third world countries face many challenges from the time they are born. Barriers that limit their participation in national development involve no access to education, nutrition, resources, social amenities and formal employment opportunities. These barriers are intricately related to low income levels amongst women and ultimately all society members lose in fighting poverty:

Poverty exacerbates gender disparities... gender inequalities hinder development. While disparities in basic rights; in schooling, credit, and jobs; or in the ability to participate in public life take their most direct toll on women and girls, the full costs of gender inequality ultimately harm everyone... A central message is clear: ignoring gender disparities comes at great cost-to people's well-being and to countries' abilities to grow sustainably, to govern effectively and thus to reduce poverty... (World Bank, 2001, xi).

The following section discusses the historical effects of colonialism and subsequent urbanisation issues on African women and their access to development. I also briefly talks about decolonisation processes to explore strategies for empowering that African woman.

*If you call a woman "African woman," she no go 'gree,
She go say "I be lady oh..."
She go say "I no be woman."
African woman go dance, She go dance the fire dance,
She go cook for um, She go do anything he say.
Na lady no be so. Lady na master... (Fela Kuti).*

The above lyrics from a renowned African musician, Fela Kuti, represent the dichotomous thinking as relates to the perception of the African woman. On the one hand there is a woman who insists she does not want to be called "African woman." This liberated and mostly educated woman acts contrary to what her society dictates. She is perceived as arrogant, rebellious and stubborn; she is more than an African woman, she is "a lady." On the other hand, is the typical view of the African woman: submissive, cooperative, homemaker and keeper of her household. She is a strong woman of character, grace and strength. She cooks, cleans and cares for her children. She '*dances the fire dance*' and is proud of that.

However, the traditional African woman who once thrived in strength and provision crumbled and weakened under colonial power. She had no access to land, she could not own property, she could not fully feed and educate her children, and in most cases she was a victim of abuse and assault. In many parts of Africa, congestion in cities has led to countless women and children living in poverty. Her barns are empty, her land unfertile and her health declining.

The body of literature on Africa and Women In Development (WID) highlights numerous crises that have sprung from Structural Adjustment Policies (SAP's) demanded by World Bank and the International Monetary Fund (IMF) (Turshen, 1994, 77; Sparr, 1994, 21). These policies emerged as correctional interventions that involved restructuring local economies in order to adopt free trade, thus strengthening the economies. However, the above mentioned policies ironically increased poverty among the urban poor and adversely affected women's health, education, income, employment, and access to land among others (Sparr, 1994, 20).

In Ester Boserup's (1970) *Women's Role in Economic Development* the problems of gender discrimination in development were raised, and have inspired practitioners to look at its effects more closely. Gender biases in economic and political control of a place necessitate a shift and definition of women's empowerment:

Empowerment is manifested as a redistribution of power, whether between nations, classes, castes, races, genders, or individuals. The goals of women's empowerment are to challenge patriarchal ideology...; to transform the structure and institutions that reinforce and perpetuate gender discrimination and social inequality...and to enable poor women to gain access to, and control of, both material and informational resources (Batliwala, 2002, 2).

Thus, empowerment becomes a means of relieving women's problems of increased labour through legislation that redistributes power and resources (Charlton, 1984, 51, 133; Massiah, 1993, 298; Datta & Kornberg, 2002, 76). Moser argues that effective gender planning interventions by nations needs to begin from strengthening the organisational capacity of women's community groups. This 'bottoms-up' approach is the key to empowerment. Examples of how women organise themselves include small grassroots organisations – such as informal credit services in Niger and Senegal (Creevey, 2002, 106) – work-based or political organisations; service-oriented or research organisations among others (Moser, 1993, 199-203).

In many African countries, female urban poor form the majority of household-heads and are the most affected population by poverty. While the number of males in the informal sector is also rising as a result of institutional restructuring and retrenchments brought about by Structural Adjustment Programs, their female counterparts dominate the sector (COASAD 2002, 106). In Kenya for instance, about 86% of the farming labourers are female (FAO, 2002, 61). Nairobi's high unemployment rate currently at 51% and slow economic growth has led to an increase in poverty among the most vulnerable

group- women. Due to high food costs, women in many developing countries eat less and in some countries eat last, thus decreasing their food consumption and compromising their own health (Turshen, 1994, 80).

The outcomes of gender-driven projects have been well documented, in terms of increasing household nutritional and dietary levels, raising levels income among the urban poor and management of housing and small enterprise development (Muraya, 2002, 106; Ostergaard, 1992, 54). One of the challenges of development planning is to reduce the many barriers preventing African women and women of other developing countries from improving their living environments. These barriers include access to land, security of tenure, access to credit services, resource allocation and unfavourable policies. These impediments actively fight against the development of a community and without addressing them, little can be achieved.

Economic and social reforms have changed women's traditional roles in food production and processing, market trading and domestic work thus reducing their opportunities to earn incomes and contribute to their household (Boserup & Liljencrantz, 1975, 7). Over time, the women's input, particularly in rural areas, becomes obsolete thus notable setbacks in national economic planning occur due to a reduction in incomes.

Since modern society depends on a market economy, women must be given the opportunities to engage in activities that at least in part generate cash income...Efforts to increase the economic contribution of women should be viewed not only as a means to make fuller use of all human resources for economic development, but also as a way of improving income distribution (Boserup & Liljencrantz, 1975, 7).

This rural-urban dichotomy gives us cues about how future research on women could be directed. When women's incomes are reduced in rural areas, their fiscal tax levies for their municipalities are also reduced. It is therefore not uncommon to find

abject poverty in rural town lacking services such as infrastructure, roads, electricity or even public toilets! This is the very reason that women opt to move into cities in search of employment and better living standards (Boserup & Liljencrantz, 1975, 16).

Instead of encouraging them to move, rural women should be given the opportunity to earn income in other ways, since their traditional methods are replaced by specialised production of goods and services. In my thesis, almost all the women interviewed had migrated from the rural areas to the city of Nairobi. This one factor, rural-urban migration, could very well be identified as the root cause of the problem of the rapid growth of slums. Investing in the education of women in agricultural production, income-generating activities, and employment in various fields *in the rural area* could thus make a significant difference. In essence strategies aimed at reducing women's poverty need to take into consideration family structures and their dynamics, in order to target development efforts in a useful manner. The practicing planner therefore has the responsibility to ensure that "*...the most desirable long-term strategy is...to increase the income available for food (or to make food cheaper), health care and education so that goods and services are in sufficient supply...*" (Charlton, 1984, 51).

Therefore, empowering Africa's post-colonial woman involves much more than lip-service. Development and empowerment can only occur by increasing her capacity to make educated choices regarding her life and providing her with alternatives to improving her physical, social, and economic well being.

4.2 URBAN AGRICULTURE AND THIRD WORLD DEVELOPMENT

The history of urban agriculture can be traced back to early civilisations – e.g. 16th century Machu Picchu, in the Andes, a town that was completely self-reliant in its

food production and consumption (Smit, 2002, 1). Even in the 18th century, European cities had begun creating wetlands and agricultural belts that would provide urban dwellers with food sources to the city. In the 19th century, for instance Ernst May proposed that cities should have a 'green belt' surrounding an urban area, not only for food provision, but also for microclimate improvement e.g. Aerial plans of Frankfurt am Main show a greenbelt surrounding the main urban centre (Best Practices Program, “*Green Belt of Frankfurt am Main*,” 1998).

That was then. Today, the same principals from antiquity are being revisited in order to solve the emerging problems in a rapidly urbanising world. However, human settlements have not always been planned for sustainability. Nevertheless, there have been attempts from architects and planners such as Ebenezer Howard, Frank Lloyd Wright, Le Corbusier and others to create liveable cities (Wojtowicz, 1996, 114). Ebenezer Howard’s “Garden City Movement” was an attempt to integrate both urban and ‘greenery’ into master planning in the late 19th century. The implementation of his ideas is seen in Letchworth, Hampstead and Welwyn cities in London (Barnecut, 1999, 5; Lucey, 1973, 11-13). Prior to this, others like Claude Nicholas Ledoux's in the late 18th Century (in *Arc et Senans*) dealt with the merging of architectural expression and the functional use urban spaces for living, through the garden city concept (Wojtowicz, 1996, 114). Moreover, other theorists depicted what utopian cities would look like. Doxiadis, a Greek planner and philosopher began by analysing and understanding human settlements scientifically. He coined the term ‘Ekistics’ which is the science of human settlements. In his view, the modern city was to be inter-connected and delicately balanced between built-up areas, green space and adequate population density (Doxiadis, 1966, 48-49, 157).

In all their attempts, however, these architects, planners, and philosophers did not address the complexities of present-day urbanisation – i.e. high density, congestion, social exclusion, gender inequality, cultural intolerance, poverty or even urban food production. This reveals the linear thinking that dominated planning in the mid 20th century (Peponis, 2001, 4).

Unfortunately, their utopic images have continued to influence existing urban development and planning in the western world. Although these ideologies have also been transferred to developing countries, they have proved to be unsuccessful as sustainable development models. In Kenya, as in many other developing countries, the pressures of solving urgent concerns of poverty, food security and unemployment override the necessity for long-term sustainable utopian planning.

So why is urban agriculture important to development planning?

4.2.1 MUNICIPAL ROLE: URBAN AGRICULTURE IN LAND-USE

PLANNING

In developing countries, particularly Sub-Saharan Africa, the twin role of urban agriculture to increase food security and alleviate poverty, is of growing importance in both rural and urban areas, as more people live in cities. Ongoing research in the topic suggests that UA is compatible with other urban planning endeavours, such as urban renewal, residential and commercial developments and wastewater management in improving quality of life (Quon, 1999, 33). In addition, although urban agriculture is not recognised as a legitimate urban land use by many local authorities, its role is of growing importance since it exemplifies sustainability and sound environmental management.

However, many municipalities and governments – from both developed and in some developing countries – are more open and aware of the potential of urban agriculture and greening of the city. They acknowledge that it is possible to incorporate UA practices in planning and zoning as complementary and compatible land uses with other municipal objectives (Greenhow, 1994, 14). Not only does UA provide nutritious foods for poor families, but it also provides employment for producers, hired labourers and persons engaged in micro-enterprises. Programs such as Food and Agriculture Organisation (FAO), World Health Organisation (WHO) and United Nations Development Program (UNDP) are studying, integrating and facilitating urban agriculture as part of their efforts to enhance sustainable urban land management in both developed and developing countries (RUAF, 2004).

Survival is the main reason for the urban poor to engage in urban agricultural practices. According to the Welfare Monitoring Survey of 1997, 38% of Nairobi's population suffers from food insecurity. A high level of poverty is evident in the ratio of income spent on food versus other non-food expenditures. In the case of Nairobi's urban poor, almost 50% of the annual income is spent on food purchase, with less on housing, education or savings (Ngara-Muraya, 2002, 109). As a response to these harsh economic times, urban women and men have gravitated towards urban farming practices in order to raise household income and food security. Their practices are generally found in every available accessible space: on road reserves, riverbanks, home gardens, back yards and unused open spaces. In Nairobi, although urban agriculture is excluded as an urban land use in the Planning Act of 1996, statistical evidence suggests that 77% of urban farming produce is consumed by households in urban centres (Mireri, 2002, 16). Clearly, there is a place for formalising and institutionalising UA activities in the city.

In localising global concerns, I propose that urban agriculture can be one catalyst for creating sustainable cities – the node for addressing social, economic and environmental problems, and the place where the urban poor are marginalized and excluded from neo-capitalist gains (Mitropoulos, 2001). The urban poor activate this catalyst in a convoluted manner through self-provision – despite irregular policies, lack of secure tenure, limited or no access to land, credit, agricultural input or extension workers (Quon, 1999, 24).

Numerous forms of urban agriculture exist in world history. Early examples include the Garden City movement of the 19th century (Lucey, 1973, 11); Victory Gardens in post World War II period in North America (von Hassell, 2002, 10); Rooftop Gardens and community gardens in inner city neighbourhoods in various Canadian cities (RUAFA, 2004). The common thread found in the literature is the purposeful, extensive and intensive greening of urban public open spaces and/or buildings for either food security, or urban improvements and upgrading. In Winnipeg, Canada, allotment gardens can be found on railway and hydro lands.

At a larger scale, Germany has an 80 square-kilometre circular Green Belt surrounding the city of Frankfurt (BLP, 2003). The typical landscape has an open grassland area, water meadows, open orchards and a city forest. The extensive chains of new parks represents a consistent continuation of Ernst May's Green Belt concept of the twenties.

In the City of Sydney (Australia), an annual Spring Bloom festival occurs for 6 weeks in the spring, where city residents and communities boast their gardening skills through planting herbs and flowers on garden beds located on designated city streets (Needham, 2002). Top landscapers and gardeners join with local communities to display

their talents. The festival brings in visitors from all over the world and encourages Sydney to upgrade the city, using plants, herbs and flowers. Elsewhere, the French *potager* gardens in Villandry, France are also used as design precedents for my demonstration study. Deriving its name from *potage*, the French word for soup, a *potager* garden is a formal, geometric and ornamental kitchen gardens based on vegetables, herbs and other edible plants. These flora are chosen based on form, colour, taste and texture (Villandry, 2004; Smith, B., 2004).

In many cities around the world, municipalities have created an inter-sectoral working relationship with other levels of government, private enterprises and community groups, to make their cities attractive by increasing green spaces by designing parks and adorning streets with flowers herbs and local vegetation (). In the case of Mozambique, women are the main participants in these greening/urban agricultural initiatives (BLP, Interview, 2003).

In the next section, I discuss two case studies where urban agriculture activities were designed around slum areas, and how they have directly or indirectly affected the capacity of poor women.

4.3 GENDER AND URBAN AGRICULTURE: A CRITIQUE ON PRACTICE

4.3.1 CASE STUDY: LESSONS FROM CUBA AND HAITI

4.3.1.1 THE CUBAN MODEL ON URBAN AGRICULTURE

The concrete sprawl of Havana seemed an incongruous setting for Consuelo Torres to be clutching a clump of organically grown and freshly picked spinach. But she had just been shopping at one of the many state-run urban vegetable gardens developed in vacant lots here in the capital and in other cities and towns across Cuba. The gardens are part of a new effort by the socialist government to ease food shortages and nutritional problems that have beset the nation since the collapse of its patron, the Soviet Union, in 1991 (Kovaleski, 1999).

The Caribbean island of Havana has one of the most extensive and well documented urban agriculture programs in Latin America. The city has more than 2,730 government operated gardens located in Cuba's 169 municipalities. These gardens have created employment opportunities for over 22,000 workers who sell a wide variety of vegetables and herbs directly to city residents at lower prices than those at mainstream market levels (Kovaleski, 1999). The Cuban model is selected due to the sheer magnitude, efficiency and impact of urban agriculture in creating food secure communities.

Following the collapse of the Soviet Bloc and the dissolution of the Soviet Union, Cuba faced the greatest economic crisis heightened by trade embargoes sanctioned by the United States of America. With this, the small underdeveloped Third world country was unable to import Russian food, oil, pesticides or farming machines needed to grow food. The resulting solution was a paradigm shift based on self-reliance and agro-ecological sustainability that is to date unprecedented at a national level (Chaplowe, 1996; Rosset, 2000, 203; Funes et al., 2002, xvi).

The Cuban government receiving no food aid or food imports was forced to address hunger and food security issues by ingenious means. I specifically chose the

Cuban model due to the radical response the government took when they knew they could not rely on food aid. In many developing countries the issue of food aid is an important one when hunger, floods, drought or war cripple nations from being able to feed themselves. If these same countries were able to address food security issues *before* these disasters occur, then food imports would be unnecessary, and the majority of people would at least have access to safe food grown in sustainable means.

African countries not only suffer from internal conflicts, wars and natural disasters, but also face rapid urbanisation which has increased the numbers of poverty stricken families in cities. Finding homes in city slums and squatter settlements, poverty is made more evident in food insecurity. It is not uncommon then, to find unsafe farming practices such as sewage farming or the use of contaminated river waters for gardening.

So how does Cuba relate with this African study? After independence, post colonial administrators of the State, for the most part continued to adopt certain policies and practices that to date, stifle the notion of development. For instance, in Nairobi, Kenya it is illegal to grow food crops on open public spaces although taking a drive in the outskirts and in the slums and one sees these corn, and a variety of vegetables grown on streets and road reserves. Despite a known fact that UA is illegal in Nairobi, a lack of reinforcement exacerbates its practice on many open public spaces (Mireri, 2002, 15).

In Cuba however, the government promoted UA and encouraged the general population to grow food crops on community gardens on every available open space.

“...a strong urban agriculture movement has developed in Cuban cities and suburbs. The goal of this movement is to maximize the production of diverse, fresh, and safe crops from every patch of previously unused urban land. This urban production is based on three principals: organic methods that do not contaminate the environment, rational use of local resources and direct marketing of produce to consumers” (Companioni & Hernández, 2002, 220).

Cuban *huertos populares* (people's gardens) which began in the city of Havana in 1991, are the best examples how open spaces are intensively cultivated for food production in the city. These small state-owned plots of land are cultivated by people in times of food shortages, and are found in both rural and urban areas in Cuba's 15 municipalities (Rosset & Cunningham, 1995, 23; Chaplowe, 1996). These garden plots are sometimes abandoned plots, or vacant plots, which if used for cultivation, are acquired at no cost to the farmers. This means that majority of persons overcome the barrier of land access. Men are the majority of the gardeners as opposed to women and children, and crops grown range from vegetables and fruits, to medicinal plants and various plant species. Without imported herbicides and pesticides, these gardens and foods grown in them are purely organic and dependent on biodegradable resources such as cow manure, vermiculture (the use of worms for the production of nutrients) and household compost (Companiononi & Hernández, 2002, 232).

Clearly, the Cuban model offers my thesis key principals on integrating UA in urban planning through civic, technological and government support. The by-products of these partnerships include community building, ecological diversity, economic and food security. The Cuban model was selected as it shows government response to the enormous problem of food production within stringent circumstances. Moreover, the success of the food security issue in Cuba offers planners in the developing world an alternative development paradigm that is based on nations looking inwards by exploring, adapting and creatively using natural, human and technological resources for self development.

In developing countries, an important concern is to ensure that alternative technologies offer real possibilities for small and resource-poor farmers, while enhancing household food security and protecting the environment. The Cuban

experience has demonstrated that the adoption of agro-ecological methods in rural communities and in cities, through urban agriculture, can bring about productive and economic benefits in a socially equitable manner (Altieri, 2002, xi).

In addition, Cuba's sustainable urban agriculture has created economic stability with its wide-scale job creation and employment opportunities for over 160,000 Cuban farmers, professionals and workers. Farmers, apart from feeding their households, are also able to sell surplus produce from urban gardens to eager urban dwellers (Companiononi & Hernández, 2002, 221). Meeting this need is critical since urban areas normally place the highest demands for perishable foods. At the same time, these vegetable gardens ensure that city residents have access to fresh organically produced vegetables. Shortening food miles ensures that a majority of Cuba's population – both rich and poor – are food secure.

“The urban gardens...have been able to circumvent many of the logistical hurdles and other problems that afflict agriculture in the countryside. There is no need to transport vegetables grown on these municipal plots because people buy them on the spot” (Kovaleski, 1999).

4.3.1.2 PRINCIPALS OF THE CUBAN MODEL

There are several factors that make the Cuban model exemplary on integrating the islands urban planning and Urban Agriculture. These key principals based on sustainability, equitable distribution and maximisation of resources to attain food security. The table below summarises the key principal briefly (Table 6).

TABLE 6

CUBAN MODEL PRINCIPALS

Principal	Key concepts
Government support	<ul style="list-style-type: none"> Favourable policies and programs as well as the institutionalisation of urban agriculture in all levels of government. Integrated urban planning master plans focused on greening
Nation wide impact	<ul style="list-style-type: none"> Uniform distribution of Urban Agriculture throughout the country Use of every available patch of land to produce food, through intensive cultivation and production in high yields
Civic participation	<ul style="list-style-type: none"> All age groups and persons from all socio-economic strata are involved in urban agriculture (not only the poor, but also academics, technicians, scientists, women etc.)
Targeted marketing	<ul style="list-style-type: none"> Logical correspondence between production and the number of dwellers in each region/municipality Fresh supply of perishable goods offered directly to the population, about 300g of vegetables daily per capita and variety of protein sources
Technology & science	<ul style="list-style-type: none"> Multidisciplinary integration and intense application of science and technology
Agroecology	<ul style="list-style-type: none"> Intensive use of organic matter to improve soil fertility and biological pest control Crop-animal integration with use of synergies to boost production
Economic benefit	<ul style="list-style-type: none"> Maximising the potential of food production, by employing local labour, recycling wastes and by products for plant and animal nutrition.

Source: Adapted from Funes et. al., 2002, 223.

One other aspect not included in the table is the increasing role of Cuban NGO's in enhancing the role of women in society. Not only do the NGO's encourage women to enrol in secondary and higher education institutions in rural areas, they also empower them to make sound decisions regarding food security issues. These organisations offer training programs where women acquire skills and develop careers as certified technicians, educators, managers and leaders in various agricultural departments. This

positive role is a direct result of improving their access to information and active participation outside the home. This has significantly raised their status in society and has demanded respect in a male dominated and patriarchal society (Funes et. al, 2002, 52).

One of the reasons why Urban Agriculture is successful in Cuba has to do with its institutionalisation at all level of government. This is because food security was and continues to be seen as a priority by the Cuban government. Also, the government has decentralised the Agricultural sector to municipal and individual household level, by offering incentives, technical support, seedlings and land for food production (Kovaleski, 1999). Within Cuba's 15 municipalities, are 104 people's Popular Councils which are also called *Consejos Populares*. These councils are the local government councils at a neighbourhood level. In each of these councils, an agricultural government official coordinates activities relating to urban agriculture specific to that area.

At a municipal level, the Municipal Urban Farm co-ordinates activities for the Popular Councils by providing infrastructure, technical assistance and administrative organising of all councils in each municipality. All Municipal Urban Farm organisations fall under the Ministry of Agriculture under the Urban Agriculture Department. These 26 administrative sub-programming offices attend to urban agriculture and each specialises on specific areas such as soil management, irrigation, vegetable and herbs, small scale agro-industry etc. (Companioni & Hernández, 2002, 221, 225). The most well-developed and popular activity occurs in vegetable gardens, small plots and in back yards. The yields from this activity have contributed 1.38 million metric tonnes of fresh vegetables per year into the national economy. Other common activities are organoponics (organic plus hydroponics) and intensive vegetable gardening, large gardens adjacent to factories, offices and businesses, thus meeting demands for cafeterias and restaurants, suburban

farms along the periphery or city outskirts, and apartment gardening in city centres (Companiononi & Hernández, 2002, 225).

Cuba's urban agricultural activities have been a planning priority since the *Havana Master Plan* of 1962 which especially advocated for more green space for municipal parks. Today there is a green belt around the city of Havana where most peri-urban agriculture activities take place (Cruz & Medina, 2003, 83). Under the master plan, the city designated land areas for parks at a municipal level as well as developing new sites for greening activities such as gardens and agricultural preserved land. Although the green belt in Havana exists, the methods of implementing are done with community involvement and women are both participants and leaders in these organisations (Cruz & Medina, 2003, 65).

The Havana Belt has had a great impact on the environment and the city residents. Not only are the parks accompanied by activities such as walking trails, recreational sites, historical walks etc, they are also incorporating urban design by blending spaces with private areas, public gardens, street parks and boulevards. As authors Cruz & Medina (2003, 159) have noted, the key lesson in the Cuban example is that:

...government plans and layouts have been made, refined and adjusted to suit the potentiality and restrictions of the land base and to reflect the new demands and requirements of the Cuban society and the city. These governing plans and designs are made compatible with those of the other sectors (water system, public health, community service, environment agency and others), to ensure the participation of all stakeholders in the general interest of the city.

The inclusion of urban agriculture then, adapts to the conditions and maximises the use of resources in order to meet the changing needs. In the following section, I briefly discuss one precedent in Haiti, which combined the concept of Urban Agriculture with

slums. This thesis includes the Haitian model, as carried out by one international organisation, in order to identify the strengths and lessons learned.

4.3.2 URBAN AGRICULTURE IN SLUMS OF HAITI

Haiti's capital, Port-au-Prince, has a population of about 1.2 million people. It is projected that by the year 2040, the population of this city will grow to about 6 million. The percentage of people living in slums around the city is about 75% of the urban population (Eberlee, 1999, 2). Haiti, like many African countries, has also been affected by internal conflict, a weakening economy and devastating hurricanes in recent years. These factors, together with rural-urban migration, have increased the numbers of poor people living in shanty towns, just like Nairobi's slums:

Many Port-au-Prince families live in shanty towns consisting of small houses with metal walls and roofs, although some residents inhabit larger houses with flat concrete roofs. Homes are generally built close to each other – leaving no space between buildings, apart from roads – or on steep slopes. Despite this, urban agriculture has been practiced as a survival strategy in many parts of the city by residents who plant a few crops or a couple of fruit trees next to their house or in available vacant lands (Eberlee, 1999, 2).

However, efforts have been made by local and international communities to address poverty issues in the small island through community economic development programs specifically targeting areas such as housing, nutrition, health, education etc. CARE-Haiti is an example of one of these international programs that was able to address and encourage urban agriculture as a means of improving incomes and food security in Haitian slums. These urban gardens were created jointly with men and women in the slums in order to reduce dependency on purchasing food.

CARE-Haiti was launched in 1996 with the partnership of CIDA (Canada International Development Agency), IDRC's Cities Feeding People (International Development Research Council), CARE-Canada and CARE-USA, among other NGO's (Eberlee, 1999, 2). The purpose of CARE-Haiti was to:

To design, monitor and evaluate the introduction, dissemination and adaptation of locally appropriate horticultural technologies in selected shantytowns of Port-au-Prince, which will increase participating households' food self reliance, improve their health, nutritional status and disposable income, while at the same time improving crop productivity and the local living environment (IDRC, 1999, 1).

The most interesting aspect of CARE-Haiti was the way in which they promoted Urban Agriculture amongst poorest members of the slums. In Porto-au-Prince's today, there is much evidence of food cultivation such as corn, peas, cassava etc. However, CARE-Haiti was able to increase accessibility to land for further food production through demonstration studies located around slum areas. This 5-year pilot program sought to benefit women and children, through technical training and feasibility studies on the potential of UA activities within the context of slums. In their study, they felt that they would be able to increase food availability, specifically improve women's incomes and thirdly, advocate for a healthier living environment through good nutrition and recycling of organic wastes (Régis, 1998, 2). The project was based in two slums, *Mapou-Fon Brach* and *Cité Siclait*, where approximately fourteen demonstration gardens were constructed by two groups of seven participants in each slum. Research methods used by CARE-Haiti included baseline surveys, focus groups, observations and demonstration sites. The entire program was keenly evaluated at intermittent periods for progress (Régis, 1998, 3).

Results from the survey showed that there were great gender disparities in education levels and income. Also, over 40% of each household income was spent on food purchases. They also found out that 1/3rd of the families ate only one meal as compared to approximately one half of the households who ate two meals per day (IDRC, 1999, 2).

By mid-1999, CARE-Haiti had established over sixteen demonstration gardens in the city of Port-au-Prince, and an additional three gardens in Gonaives. These demonstration sites comprised over 14 different varieties of vegetables such as Swiss chard, eggplants, turnips, tomatoes, beets, lettuce and other vegetables. These vegetables were planted creatively on rooftops as well as in recycled containers such as tires, bamboo baskets etc. (Regis, 1998, 4; Eberlee, 1999, 3).

Evaluations after the first 3 years of the pilot program showed that women between the ages of 15 and 45 eventually became producers and managers of the gardens. Not only had their nutrition improved, but so did their disposable incomes which could now be spent on non-food expenditures for their households (IDRC, 1999, 2).

CARE-Haiti also began training centres where community members would receive training, skills, resources and agricultural inputs for the demonstration gardens.

Participants of the training sessions have a variety of occupations, although few have stable or regular jobs. The women include merchants, factory workers, seamstresses, and domestic servants. The men include carpenters, bricklayers, and chauffeurs. Some primary school students and their teachers are also attending the sessions. During the training period, participants learn how to convert spaces - ranging from backyards and vacant lots to roofs, walls, porches, and verandas - into garden plots suitable for growing food (Eberlee, 1999, 3).

Training sessions are divided into three groups namely, school clubs for boys and girls, adult groups for men and women and finally a youth group for teenagers.

Participants meet for two hours each week to discuss as well as learn more about urban agriculture from Haiti Garden staff. Structured modules ensure that topics such as light, water, composting, grafting etc are taught to all participants. This type of learning is also augmented by participatory methods where hands-on experiments are conducted. As participants return each week, they are able to discuss findings from their experiments to share and solve any problems they might encounter (Régis, 1998, 4).

4.3.2.1 LESSONS FROM HAITI

Given the fact that the CARE-Haiti program was located in third world conditions, its relative success in improving the lives of slum dwellers cannot be underestimated. The factors that led to its adaptability can be attributed to a thorough pre-project research that ensured technical, administrative and institutional frameworks were set in place before going out to the participants (IDRC, 1999, 2).

Secondly, the project was successful due to close partnerships from a variety of fields who were interested in seeing how the project would turn out. Not only were international agencies such as CIDA, IDRC, CARE funding the program, they also provided technical and intellectual support needed to make the project viable. In total the project received grants of over US \$460, 000 (IDRC, 1999, 4).

Thirdly, CARE-Haiti targeted specific training sessions to the most vulnerable groups of people (youth and women) in order to empower them. In the end, participating families had enough fresh food to eat, additional money to spend on other necessary expenditures, an increased self esteem particularly for the women and additional gardening skills which could be transferred to their homes and towns (Régis, 1998, 5; IDRC, 1999, 2).

4.4 SUMMARY

The literature review that has helped form this study is multi-disciplinary and draws inspiration from three main development topics. The planning profession in both developed and developing countries is now moving to a higher level of integration to key disciplines involving human and urban development. In this chapter, I looked at how Africa's women are included in development, and the barriers that prevent them; I then discussed how Urban Agricultural practices in developing countries impacts cities and people and lastly, I provided an overview of Cuban and Haitian models of including gender, food security and urban agriculture in their city development.

The Haitian model proved that growing food in vulnerable city slums was possible. Women, given the opportunity to learn these skills, reaped bountiful harvests of fresh vegetables as well as increased disposable incomes for non-food items. In fact entire households owed their food security to CARE-Haiti urban agriculture programs.

In this next chapter, I show how I adapted a similar project in Nairobi slums by involving female participants to create an edible landscape at a roundabout in the city. This demonstration site had six female participants from an established women's group from a slum called Kibera.

5 CHAPTER V: THE DEMONSTRATION STUDY

5.1 PROJECT BACKGROUND [Why, What, Where, When and What]

5.1.1 PROJECT AIM & STATEMENT

The aim of this demonstration study was to develop a participatory design project that addresses key urban issues in the third world, namely: poverty, women's empowerment, food security and urban development, on a single site in Nairobi with the direct involvement of slum women.

Drawing on participatory planning theory and approaches for design project, this study explored the experiential applications of theory in practice, with a specific focus engaging women from a developing country through a holistic development planning process.

5.1.2 IMPLICATIONS FOR THE DEMONSTRATION STUDY

The study attempted to augment planning theories by putting forward a planning paradigm designed for planning practitioners in developing country contexts. This action research methodology was assessed through a multi-variate evaluation process based on the theoretical underpinnings described earlier i.e. people-centered development paradigms. The demonstration then underwent an analytical process which tracked the study activities from pre-implementation to post-implementation, sieving them through a selection of meaningful participation, as proposed by various theorists and writers on participatory planning. This extensive analytical section, measured the results achieved against objectives stated in this thesis.

5.1.3 SKILLS, KNOWLEDGE AND ATTITUDES

As seen from literature, women together with their children are most affected in development processes. This demonstration study was designed to facilitate the sharing of skills, knowledge and insights from the development literature to enhance full participation and empowerment of women. First, the aim was to encourage women from the slums to engage in a meaningful practical study *outside* the slum. I felt that conducting the research in an open space would get more attention to the research. In retrospect, a site closer to the women's homes would have been more efficient for sustaining the work. However, the issues of land titles and ownership (who owns squatter land) would have been difficult to overcome since slums are illegal settlements. It would have been unethical and perhaps impossible to get the City's permission to do research in the slum areas.

Secondly, food security was and continues to be a great concern in the slums. The idea was that the women would grow local vegetables on the site in an aesthetically functional manner. The produce would be for their household consumption and any surplus could be sold to neighbours in the slums or passers-by for additional income. Thirdly, in order to make the project fit within the City's improvement programs, the main objective was to demonstrate to both City officers and the women, that there was a possibility of developing an open public urban space for additional practicable reasons apart from mere beautification.

5.2 SITE CRITERIA AND SELECTION

Roundabouts are a common transportation feature in Commonwealth countries. They are road intersections where traffic moves in a circular motion around a central

island. In some African cities, these islands are zoned for several uses including landscaping public art, or as temporary markets for merchants to sell various products.

The following criteria were used to select a suitable roundabout for the project:

- Visibility and notable need for upgrading
- Accessibility by all research participants
- Accessibility to a constant water source
- Adequate sun exposure and limited wind
- Safety and security.

5.2.1 THREE PLAUSIBLE SITES

The City Council authority in charge of all open municipal public spaces (including boulevards, street sides and roundabouts) was the Department of Environment. Appointments were made with the head and assistant head of this department for project briefings and requests. They gave me a list of feasible spaces, and I made arrangements to visit them. One site, the Aga Khan Walk Boulevard, would have been perfect since it was in an area in the downtown that had more traffic, thus more visibility. However, I was made to understand that any design work would need to withstand constant vandalism from street youth. Also the safety of the women, and accessibility for materials to be delivered became other deterrents to pursuing this site.

After several consultations with the Department of Environment, development practitioners in the city and civil officers in the Landscaping departments of the City Council of Nairobi, I narrowed down to the following roundabouts that would be optimal for my project:

1. Globe Cinema Roundabout

This is currently the largest roundabout in Kenya. It is also one of the bigger ones in East and Central Africa. Spanning approximately 3000 meters at its widest

diameter, this site is quite accessible from the downtown. On its western side, it is bordered by a steep slope used as a market for traditional crafts, souvenirs, cloths, jewellery and African regalia. This “*Maasai Market*” open on Tuesdays and Thursdays, is frequented by tourists as well as local consumers.

Due to the large crowds drawn to the market area however, the roundabout and its adjacent streets and spaces are home to a lot of homeless youth, idlers and petty thieves. Violence is a common occurrence, particularly for unknowing women. Inside the island, youth ‘hangout’ sleep and even take baths in the Nairobi River which crosses the roundabout through the middle.

Since there were a real safety and security concerns at this site for our project, it was decided that perhaps there were better options for me to look at. Another drawback that arose after consultation with practitioners, was that at the time of my research the site was being reviewed for approval for a major agricultural demonstration study funded through a partnership among international organisations (such as the International Institute for Sustainable Development), local environmental NGO’s and the City Council of Nairobi.

2. Parliament Buildings Roundabout

This was the first choice for the project due to its proximity to the downtown and connectedness to major transportation routes. The roundabout, located within Nairobi’s CBD area was a perfect size, about twenty meters in diameter, and there was even speculation that it had an underground water supply running through it.

However, after I had submitted a proposed sketch plan to the Department of Environment for a temporary permit, I was notified during a site visit that the roundabout had been allocated to another individual who was interested in

landscaping the island as part of his artistic skills. I thought and even discussed the possibility of sharing the space and working with this individual along with our team of women. Soon after consulting with the Department of Environment, I was notified that the other gentleman was wrongfully given a permit by the Landscaping Department. The permit would be revoked and given to me instead. This bureaucratic error was not speedily resolved and I gave the site up entirely in order to avoid confrontation with the individual and City Council workers.

3. **Adams Arcade Roundabout**

This site was located outside of the CBD, along a major highway, Ngong' Road, that runs westwards from downtown towards the rural town at the foot of Ngong' hills. The roundabout, called Adam's Arcade Roundabout, is bordered by upscale residential suburbs to the north, and Nairobi's largest *Kibera* slums to the south. It was easily accessible by research participants who would walk for about half an hour to reach the site. Also, there was a water source from a neighbouring gas station, whose owner graciously allowed us to use his water before the seasonal rains came. Due to the traffic flows, the site was safer than the previous two, and thus, it was optimal for the team to work in daytime hours. The site was a good size and had a water source nearby. It also needed some physical improvement. Once I had briefly sketched a concept design (to be reviewed later by participating women in phase II), I submitted the proposal to the department. I also wrote formal letters requesting for use the roundabout. My letter read in part:

“RE: PERMIT FOR USE OF PUBLIC OPEN SPACE FOR DEMONSTRATION STUDY

...The demonstration study will take 12-15 weeks on an approved site within the Central Business District or another viable site within Nairobi Province. The participants will be a small group of urban women, who with the assistance of Extension workers from the Ministry of Agriculture, will landscape and re-green an open public space such as a roundabout, a boulevard, a road side, with both horticultural and floral plants.

The objectives of the project are:

1. To re-green, beautify and improve the image of an open city space with functional plants.
2. To empower young women by training them in agricultural practices.
3. To provide poor women with a source of food.”

The assistant head of the department of environment noted he had a problem with the fact that I would be growing food in the roundabout. He said that City by-laws forbade this activity. I then told him that this was the reason I was conducting the research: to show that the City can be socially responsive by meeting the needs of urban poor, while at the same time employing new ideas to improve city spaces. At his point, he asked me to meet with the department head.

Once an appointment was made, I re-iterated my rationale to the department head. It was at this point that he highlighted his concerns regarding urban agriculture. Some of these challenges were:

1. Vehicle emissions as air pollutants and the possible contamination of crops.
2. Agriculture is a rural activity and not an urban one
3. Existing bylaws forbade the growth of agricultural crops in public spaces
4. Vandalism and stealing of food crops and design features
5. Financial resources to fund the project

After the meeting, I answered and addressed his concerns by restating that the project was temporary, and that the food crops would be uprooted after the project was completed. I also emphasised that this was experimental and that the main idea was to

show the progressiveness of the Council in terms of integrating slum women in their programs and services. I said the objective was to provide them with a source of local vegetables, and that any surplus would be theirs to sell for profit. In terms of finances, I mentioned that my university travel grant would cover the cost of the project and that I would only require their approval and some technical support. At this point, he reiterated that food crops would have to be excluded.

I had to think on my feet and fast!

I then asked if he could permit the growth of medicinal and herbal crops. His immediate response was, "Will they look like vegetables?" After that meeting, I assured him that the designs would comply with city bylaws and landscaping guidelines, and that all medicinal and herbal crops would not be readily identified as food crops. I reminded him that I would not plant 6 foot high corn, and that I would ensure that the design fit in with the City-wide 'Beautification Program.'

When I re-submitted my letter for approval, the letter had been edited by the assistant head. All terminology relating to agriculture and food were omitted:

"RE: AUTHORITY TO BEAUTIFY ADAMS' ARCADE ROUNDABOUT

...The demonstration study will take 12-16 weeks on the Adams Arcade Roundabout in Nairobi. The participants will be a small group of urban women who, with the assistance of extension workers from the Ministry of Agriculture, will landscape, re-green and maintain the roundabout.

The objectives of the project are:

4. Re-green, beautify and improve the roundabout with functional plants.
5. Empower poor women by training them in landscaping."

Two weeks after this meeting, I was given a temporary permit for my research for a period of 16 weeks provided that I do not disturb the existing plants.

5.3 PROJECT IMPLEMENTATION (RESEARCH METHODS)

The study used qualitative research methods as suggested by Lofland (1993) and Guba & Lincoln (1989, 156-183). Partners included Nairobi Central Business District Association, City Council department of Environment and Planning, a local Landscape designer (who provided the seedlings, manure and soils) and two Ministry of Agriculture workers who assisted in conducting interviews.

In the first phase of the study semi-structured interviews and site visits, were the main research methods, while during the second phase a case study methodology was used to design a demonstration study, as a mode of testing out research questions posed. The demonstration was an ideal method for this study because it provided an opportunity to test ideas about integrated multi-disciplinary sustainable urban development for developing countries. This act of implementation “...when applied in a deliberate and adaptive way, ... involves a process of comprehensive transition over time, where the existing built urban environment undergoes positive transformation” (van Vliet, 2000, 190). It is this very aspect of positive improvement of built, social and human conditions that captures municipalities, organisations and communities attention to embrace new planning strategies and technologies. Demonstration studies thus, “provide the necessary signals of what does not work, thus identifying what requires modification in the more centrally developed plan. Without such action this is not evident, or remains speculative” (Van Vliet, 2000, 190). When a demonstration study is initiated, its aim is to showcase practical results which can then be analysed before applying the model into broader or larger-scale projects. This is certainly the reason why many European countries have decided to fund such projects particularly in urban and ecological development (van Vliet, 2000, 199).

Throughout the practicum, audio-visual documentation was used for documenting research activities. A twenty minute video captured the research and fieldwork from the initial research background to a final focus group held at a school located in the slum. The video aided in disseminate research results after the study was conducted. Ideally, it would have been shown to the research participants for feedback and comments. However, due to time constraints, I was unable to show the participants the final product.

Other participatory tools such as presentations, group briefings, the use of graphic images, informal seminars, were also applied.

This next section details the research methodology as conducted in two phases: 1) Results from the semi-structured interviews with randomly selected women from various slums or squatter settlements around the city of Nairobi and 2) The demonstration study which involved a group of six women (also interviewed from phase I) who participated in greening activities at the Adams Arcade Roundabout (Chapter 1, Section 1.3, pp 5).

All women in this study were handpicked from an existing and established women's self-help group whose membership was entirely from their Nairobi slums. Their community activities involved peer-to-peer support, celebratory dancing and singing activities, financial and resource supports and informal group savings account.

5.3.1 PHASE 1: SEMI- STRUCTURED INTERVIEWS IN TWO SLUMS

The aim of this first phase of the study was to explore the degree to which female urban poor were in favour of urban greening/agricultural practice in the city of Nairobi. Semi-structured interviews were administered over three days to female farmers selected randomly from three slums: *Kibera*, *Maili Saba* and *Kawangware* slums. The women interviewed were either urban farmers or small business owners. Having sought the

assistance of Extension workers from the Ministry of Agriculture, these interviews were equally administered to members of an established women's group in Kibera. Some of these interviewees later formed the working team for Phase II demonstration study.

This was perhaps the most interesting aspect of the research. Site visits and observations were key to establishing the project in context. In line with a large part of the literature on community participation, the most important pre-requisite was to establish and build the trust of research participants. In retrospect, the interviews the entry point for meeting with and talking to women in the slums. An interesting point to note is that although I was of Kenyan origin, and although I had received a western education and training, it was difficult to administer the semi-structured interviews. All of a sudden, as I introduced myself to randomly selected women in the slum, I could not find the *Kiswahili* words to translate that I was research the *integration of urban poor women in sustainable urban development through an exploratory and multi-disciplinary study!* Fortunately, I had teamed up with two women who worked for the Ministry of Agriculture as extension workers. These women had many years of experience talking to women farmers in the slums of Nairobi. Therefore, I accompanied them for the first five interviews in order to listen to their introductory techniques and communication styles as they administered the interview. By the fifth interview, I was confident enough to go alone and seek out women as they conducted their daily lives in the slums. The main aspects were simplification in communication, respectfulness in asking questions, and patience in noting down responses, as participants took time to reflect on their lives.

Some of the questions were: *1) Are you involved in any form of urban agriculture? If yes, where do you grow your crops? 2) What are some of the risks or*

challenges of practicing urban agriculture in the city? 3) How would you describe your working environment? Responses were noted immediately, as the participants answered questions. (See Appendices 1.1: Research Instruments.)

The interviews were administered to urban poor women in the slum who either practiced some sort of farming in the slums or who ran small businesses. All of the women interviewed had several children whom they were taking to various schools near the slum areas.

5.3.1.1 FIELDWORK EXPERIENCES: A NARRATIVE

In *Kibera*, the largest slum in East and Central Africa, I conducted interviews in two days between 10 am and 1 pm. The reason for this timeline was due to security and availability of participants. I was informed that it would be better to limit my stay while interviewing, so as not to attract too much attention. Security and safety were my top priorities since it was evident that I was a ‘visitor’ to the slum. Therefore, I set out and began interviewing women as I found them outside their houses and businesses. They were quite pleasant and willingly answered questions. In almost all the cases, they wanted to know why a student was interested in learning about them and their lives. Once this was established, they then opened up. Some of the women held their babies while I talked. Others seemed distant and worried, while others appeared lost and disillusioned. There were also energetic and lively women who seemed to enjoy their lives despite their evident hardships. By noon, I had interviewed mostly women with small businesses of selling fruits and vegetables, tailoring and sewing clothes, or selling charcoal used for cooking stoves.

When I realised that I had no adequate sample of farmers, I inquired from local women about possible locations. They directed me and the two extension workers to walk through the slum, go over a bridge, and cross over to the southern side where they said some slum women farmed along the Nairobi River. So with backpack, camera and interviews papers intact, we set out to find the women slum farmers. We passed through narrow paths, over open sewage water flowing between houses, and along the railway line, whose reserved expansion land was filled with 6 foot high mud houses. I saw huge mounds of garbage discarded along the paths, and many children playing with balls made from recycled garbage bags. There were also many small shops selling food and grains at quantities I had never conceived before: 1 cup of corn flour, ¼ loaf of bread with 1 tbsp of margarine, ¼ kg of rice, 1 packet of laundry soap for one wash. The standard packaging weight at Nairobi's mainstream grocery stores was at least 1kg of grains (corn, rice), one whole loaf of bread, and a margarine tub of at least tub 150 grams! The smaller packaging of food stuffs echoed the low levels of purchasing powers in slum populations.

After about an hour's walk in the scorching heat, we finally found the farms, but they were under-utilised and seemed deserted. After calling out several times, one lady emerged from the farms. She carried with her a huge sack of vegetables she had just harvested. After I introduced myself and my accompanying assistants, she instructed us to return to the site the following day so we could talk to other slum women who farmed near the river. I decided I would return the following day. Since I had walked across the entire slum, I inquired from the lady on the fastest way to return to the main road so that we could return to the city. She gave us two options: walk southwards for an hour and get on the west highway (Lang'ata Road) and catch a bus to downtown OR walk through the

valley and the slum for 45 minutes, and reach the main road that feeds traffic through the slum.

This seemed far better. But as you will read in my field-notes, I had a little incident. All the other women crossed the river.

I didn't...

I fell.

Date: Tuesday, JANUARY 20, 2004
Location: Kibera slums, largest slum in Africa
Sampling: Urban poor women with children, mostly with small-scale businesses

Highlights:

- Accompanied by two extension workers, left car in my high school teacher's front yard
- Introduced to slum area by Elizabeth who owns a hair salon in Kibera.
- Got most interviews done today, however I need to look for farmers
- Walked round the entire slum (1 ½ hours walk)... Finally found the farms near Ngei Estate on Lang'ata Road, but land is neglected due to force evictions from private developers
- No women farmers found (was about 12.30pm). Found one woman with sack of harvested vegetables. Said I should come at 8am if I want to find women farming by the river.
- **YUK! Slipped and fell in sewage/river water while searching for farmers**
- After walking for **15 minutes** I finally got a tap to wash down my hand that was bleeding.
- YUK! Got a tetanus shot for the scrap in my palm... 3 days later: got an antiseptic cream for rashes and spots on my body and anti-biotics and cold/cough medicine.
- Washed clothes and runners in hot water and a bottle of anti-septic liquid...and threw them in washing machine with more *Dettol!*
- Plan: return to Kibera tomorrow to find women from the Kapuonja Women's Group

This first dip into the Nairobi River was nothing short of participatory research! The fall into sewage water was shocking, and I trembled after I got to the other side of the river. The slum smells. But I never imagined that I would be in direct contact with the

sewage water. I was completely shaken up by this and as I assessed the extent of my wetness, I realised that I had cut my palm on a jagged rock while protecting myself from falling entirely in the river. Concerned about getting an infectious disease, I sought some water to wash out the wound. But after climbing through the slum, and finding no water, I realised perhaps some salt would be a better preventive medication. After being comforted by the other ladies, we climbed up the steep slope. We found a lady, sitting outside her veranda, nursing what appeared to be a small undernourished baby. I explained what had happened and asked for some salt. She sent her younger son who came out with a packet of salt. I rubbed this painfully into my palm and thanked her.

We finally got through the slum and found one tap with clean running water. I washed off my wound as a little boy waited in line to fetch water into his small plastic container. I was now convinced that I would reduce the chances of infection since I had self-medicated the wound with salt and clean water. Later that night, I went into a 24-hour clinic in the downtown for a tetanus shot.

This incident is worth telling because it highlighted key issues of working in slums. First, I was in contact with the sewage water because it was the main characteristic of the slum. Open raw sewage is not only unsightly, but it also smells. The smell is a result of inadequate water and sanitation infrastructure. Secondly, the fall also made me realise that the water was not quite as harmful as I had imagined when I slipped on that shaky rock and found myself going for the fall. The woman who led us out with a sack of vegetables on her back, was in contact with that water *everyday* as she watered her vegetables and grains with it. She was alive and well. And so would I! This second lesson became more apparent when I witnessed sewage farmers of *Mali Saba slums*.

My first sample was not adequately represented by female urban farmers.

Therefore on the third day, the two extension workers and I set out to *Maili Saba slums* where a York University student had just completed her research on sewage farmers. This slum was one of the most volatile areas in terms of land disputes. The squatters illegally burst sewage lines and re-direct sewage water to 'water' farms. These fresh-looking green vegetables and luscious tomatoes are then sold in nearby residential out-door markets. The squatters' illegal activities were known to the government, and the local municipality, to the extent that they had promised the squatters land for relocation and farming so that they could stop their activities.

Upon arrival at the site, I was advised by the two extension workers not to take photographs and not to fully disclose my role as a researcher. This was because local residents could have mistaken me for a government worker. I was also forewarned not to write down names since they would think I was allocating land parcels to those on the list.

Cautiously, I heeded their advice not to take any photographs. The land was on the eastern part of Nairobi, towards *Ruai* dams, where wastewater treatment dams were located. The dry arid flat area was, however, interspersed with luscious greenery that seemed to be an oasis of sort. As we walked inside this 'oasis', I saw spinach, kale and tomato vines, corn, other local vegetables and fruit trees such as papaya and banana trees. This was unbelievable given the location of these farms. There was only one disturbing characteristics: that pungent smell of sewage water. The only other physical evidence of the sewage was huge house-flies that were attracted to the polluted water.

The further we got inside the vegetation, the more we found women farming. One of these women was a short elderly woman from the *Kamba* tribe. This woman could

have been well into her 70's. Her welcoming and warm nature made the interview much smoother to conduct. However, just before I began, she said that she could only answer my questions if I promised to buy her a gift. I told her I would leave her some money to buy herself some sugar she then welcomed as she blessed us with long life and thanked us with the traditional chest-spitting ritual.

I started talking informally with her about her work. One of her sons was also standing nearby listening in on our conversation. When I asked her about her farming activities, she proudly took me for a walk in her riverside farm, showing off her yield of fruits and vegetables. This senior said she had been farming along that river for over 20 years. Her eleven children had been educated from the income generated from the farm. When asked about her concerns on using sewage water, she unsurprisingly exclaimed that the water had absolutely no problem. If anything, she was glad the water was there anyway in the first place! Her major concern was thieves! When she would go deep into the farm, people would sneak into her makeshift grain storage and steal away her crop. As a result, she had decided to use traditional witchcraft to protect her grain. Upon observation, I noticed she had built a 1-foot high fence of thorn twigs around this grain storage. On one side, she 'planted' cassava tubers conspicuously. If thieves would eat the cassava, she was convinced that they would die. Unfortunately, this did not work. Hungry boys from the slum just thought she was careless in leaving her grain in an open area!

Another question I asked her about concerned the quality of her yields. She was rather shocked and said that the food was very good. As a matter of fact, she said that the sugarcane they grew was most sweet as compared to others. I then asked if they eat from the gardens directly and she said yes. I further questioned whether they washed their hands before eating, to which she said they didn't have to!

As I finished talking to her, she said that as she got older she could not foresee her children taking care of her farm. Despite the fact that they were all grown, she was concerned that her aging body would not be able to maintain rigorous farming activities. She was hoping she could return to her rural town although she had been living in the city most of her adult and senior life. I encouraged her to keep working and after some light chatting, I offered her my token of appreciation so she could buy some sugar for herself. A hug and a kiss were my thanks!

Having succeeded in this first interview, I began to really wonder what the big deal was with sewage farming. The yields looked quite healthy, farmers did not appear sickly, and neither did the water bother them! As we walked further into the dense foliage, we came across more and more women. We interviewed them one by one until we crossed the 'sewage river' and went over yonder to the other side. One of the women told us that she knew it was wrong to use the water, but that they had no alternative water sources. After observing the women, I noticed that some had skin rashes or disorders and their nails were discoloured and appeared to have fungal infections. Other than those physical attributes, they said that they did not have any ailments in their bodies.

The last woman I interviewed underscored the importance of discreetness and thoroughness of ethics review. The following field-note entry summarises that last observation:

Friday, JANUARY 22, 2004

Sampling: Urban/Sewerage farmers

Highlights:

- Today we interviewed 14 women. Really good because these were and are practicing sewerage farmers.
- Photographs: took shots of the farm produce, the 'oasis' in midst of dry grounds, the huge City Council pipe from which sewage is burst and flooded to individual gardens
- **SAD: Began to interview a lady who sells her produce to street hawkers. When I asked about her education level, she hesitates, uncomfortable and with a little prodding, shared that she was a university student in her 2nd year.**
- Off the protocol (perhaps this was wrong?), she starts to cry and says her schooling was discontinued due to an unplanned pregnancy.
- Again, fidgeting and uncomfortable, she sighs and fights back tears, and asks us to excuse her because she had to go to the meeting (burst the sewer)... I tried again, but she notified us that "There are all sorts of people there. Let's talk another day."
- She left and went down to the exposed sewage to join the other urban farmers and their husbands.
- **She was the only one wearing boots...**

HIGHLIGHTS: for the first time, the ethical/legal issues about photographing illegal activities came alive. **At the end of the interviews, when leaving, I witnessed about 8 men and 4 women, actually working on cutting through the sewage pipes (about two meters in diameter)... Compared to my fall in Kibera's (fresh water?) river, nothing could prepare me for what I saw. These men were half way into the raw sewage: no gloves, masks, boots or space-suits! Disturbing!**

This lady was the last person I wanted to interview. It turned out that she was actually a university student who been kicked out of school because of becoming pregnant. After much prodding, she confided that she was now farming in order to support herself and her son. She cried. And I stopped the interview. She seemed scared and told me that she needed to hurry to the 'meeting' where her fellow male and female farmers were bursting sewer pipes. She let me know that if she did not join the men, they would ensure that they excluded her garden from receiving the diverted sewage water. She told us that she needed this water, because her farm was her source of livelihood. She was a supplier of vegetables to many vendors who came to buy vegetables for re-selling in nearby residential housing estates and markets. If she did not join the men in diverting the sewage pipes, she fearfully whispered that there would be severe repercussions. *'There*

are all sorts of people there' she said, implying that there were thieves, hit men, murderers and aggressive men among the group.

As she walked away, I packed away my interview protocol papers, and hid my camera. I was already feeling uncomfortable because unbeknownst to us, local residents across the 'oasis' had been observing me and my assistants' movement through the farms. The lady had warned us. I then walked slowly along the path out of the farms onto the main road. On my right, I noticed more and more farmers *in* the sewage water all hovered around a City sewage line. The following was my conversation initiated by one man whose body was halfway in the sewage water:

Man:	"You? How are you?"
Researcher:	"We are fine. How are you?"
Men:	"We are also fine. Why are you not talking to us, the men?"
Researcher:	"We mean no evil or bad thing. I just wanted to talk to the women since they are the ones farming this land"
Men:	"But are we not farmers also? Why don't you want to talk to us?"
Researcher:	"Oh! You are indeed farmers too! But when you have harvested the crop, who cooks the food? Is it not the women?"
Men:	"You are right! It is the women who cook the food! Then it is well...you mean us no harm."
Researcher:	"Remain well. We have finished our talk with them. Good bye."

I then looked at the university student and could not help but notice that she was the *only* farmer present wearing protective water-proof knee-high boots.

5.3.1.2 RESEARCH FINDINGS

This initial observation and site visit were instrumental in shaping how to conduct the next phase of the study. One of the most interesting aspects of being in the slums was to directly experience first-hand the physical environment. I initially thought that housing and land development issues would be raised during the interviews as prime areas requiring improvement. It became clear though, after two days of conducting interviews that the women were mostly concerned about providing for their households immediate needs: food, education and shelter. Evident in the literature regarding gender and poverty, particularly those sources that look at household income imbalance within urban areas, are observations that “...*the higher the proportion of income spent on food, the higher the level of poverty. In Nairobi... it is clear that a huge proportion of the city’s population spends more than 50% of their income of food alone, which is indicative of high poverty levels*” (Ngara-Muraya, 2002, 109). This observation certainly was confirmed when I informally chatted with the women in the slums.

The results of the interviews were divided into two main sections:

1. Source of livelihood –
 - a. Background: size of households, income-generation activities, transportation choices, educational levels
 - b. Environment: working/business, physical structures
 - c. Experience in urban agriculture: location, types of crops grown, source of foods, and technological assistance.
 - d. Street life: period of hawking, food/goods sold on street, weekly income generated, types of weekly expenditures
2. Extent of urban agricultural activity (for demonstration participants only)

- a. Experience in urban agriculture
- b. Ideas on possible locations for the pilot study

Note:

The second portion of the interviews was supposed to be given out to government officials. However, scheduling and time constraints did not allow this second portion to be conducted while on the site.

Results from the interviews are as follows:

DIVISION OF INTERVIEWS: 1-12, 13-24, 25-36, 37-40

Tuesday, JANUARY 20, 2004

N=17

Location: Kibera slums,
 Sampling: Urban poor women with children mostly with small-scale businesses

Coding:

1, 2, 3, 4, 5, 6, 7
 13, 14, 15, 16, 17, 18,
 25, 26, 27, 28

Wednesday, JANUARY 21, 2004

Interviewed 8 i.e., 5/6 of the demo participants and 3 farmers

N=8

Location: Kibera slums,
 Sampling: Urban poor women with children mostly with small-scale businesses

Coding:

8, 9, 10,
 19, 20, 21,
 29, 30,

Thursday, JANUARY 22, 2004

N=8

Location: Maili Saba Slums, Eastlands, Kang'undo Road
 Sampling: Sewage Farmers

Coding:

11, 12,
 31, 32, 33, 34, 35, 37

Remaining N=7 (Monday-Tuesday, JANUARY, 2004)

Location: Soweto and Westlands slums
 Sampling: Urban farmers

22, 23, 24
 36, 38, 39, 40

RESULTS

The following are the results from the semi-structured interviews administered to 40 women in three Nairobi slums. The first set of data was collected in order to understand the socio-economic characteristics of slum women, while the second set of data revolved around urban agriculture activities.

In estimating women's household sizes, the results showed that 82.5% of the women's children were between 0 and 5 years. The women had a combined total of 151 children, giving an average of 4 children per mother.

In terms of sources of income, 85% of the women got most of their income from their small businesses, while 43% of the women depended on their husbands' income for family upkeep. None of the women interviewed had any formal savings scheme, although they were involved in an informal savings between and with friends.

In terms of education and literacy levels, 70% of the women had gone to primary school up to Grade 3. Therefore, majority could at least read and write their names on the research consent forms for this thesis. However, 12.5% had been denied access to education either because of cultural biases that limit educating girls, or because of financial difficulties for paying tuition fees.

The next data collected was designed around urban agriculture activities. Out of the 40 women interviewed, 55% of them were urban farmers. 55% on the riversides; 9% had gardens in their backyards while 36% had planted crops in their rural towns and villages before migrating to the city.

The variety of crops the women had cultivated varied from grains such as maize/corn, cassava, arrowroots, millet, sweet potatoes and sorghum to protein crops such as beans, peas and lentils. Fruits such as bananas and papayas were mentioned,

while vegetables such as spinach and kale were planted to complement the staple foods grown. Other crops were coffee, animal fodder and sugarcane.

Most of the women (59%) planted maize/corn which is the main staple in Kenya, while 50% planted kale and spinach for their vegetables. 32% had planted bananas, 27% beans and lentils and 18% had planted sugarcane.

For those women who had not practiced urban agriculture, 50% purchased food items from local retail markets; 18% from mainstream grocery stores and 14% from other farmers or roadsides.

I had also asked the women where they sourced their agricultural inputs such as manure, seeds and water. 18% of the women said they bought fertilisers from local shops while 9% bought manure from other farmers. From the 55% farmers in the research sample, 32% used river water which is mostly polluted while 45% used sewage water to water their gardens.

Only 9% had received visits from agricultural workers, and the remaining 91% had never received visits from extension workers on their farms. Other challenges to urban agriculture mentioned were theft of crops (41%); lack of adequate water supplies (23%); while 9% said manual labour, pests and loss of land to housing construction were the major urban agriculture threats. The remaining 5% said they could not afford buying inputs such as manure, fertilisers, equipment or seeds.

Out of the 40 women interviewed, 22 of them had been involved in hawking foods on roadsides or in their neighbourhoods. 77% had been hawking fruits and vegetables for at least 6 years, 5% for 7 to 9 years and the remaining 18% for more than 10 years.

Most of the women (64%) sold and hawked various kinds of vegetables while others sold fish, fruits, nuts and snacks (Fig. 6). When I asked where the women had got the foods and other items to sell, 73% said they sold produce from their own farms, 14% bought from retail markets for re-selling and 14% from other farmers and/or gardens. On average, 74% of the women earned \$5 (Ksh. 300) per week from hawking activities.

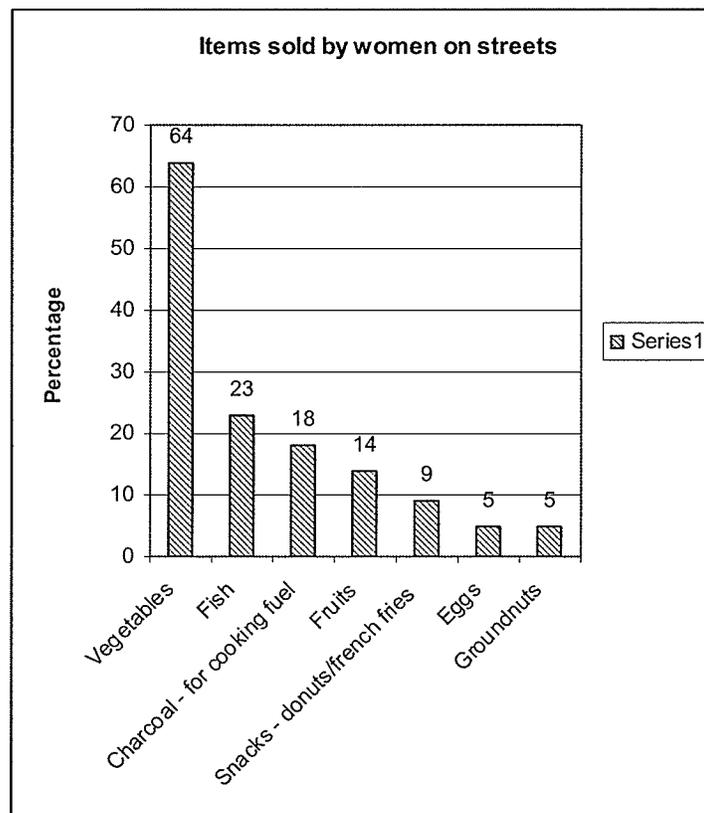


Fig. 6 Items hawked by women on city streets

On average, the women interviewed spent 37% of their incomes on food expenditures, while 63% was spent on non-food expenses such as health, children's education, rent etc. (Fig. 7). The women spent an average of \$5 per week on non-food expenditures.

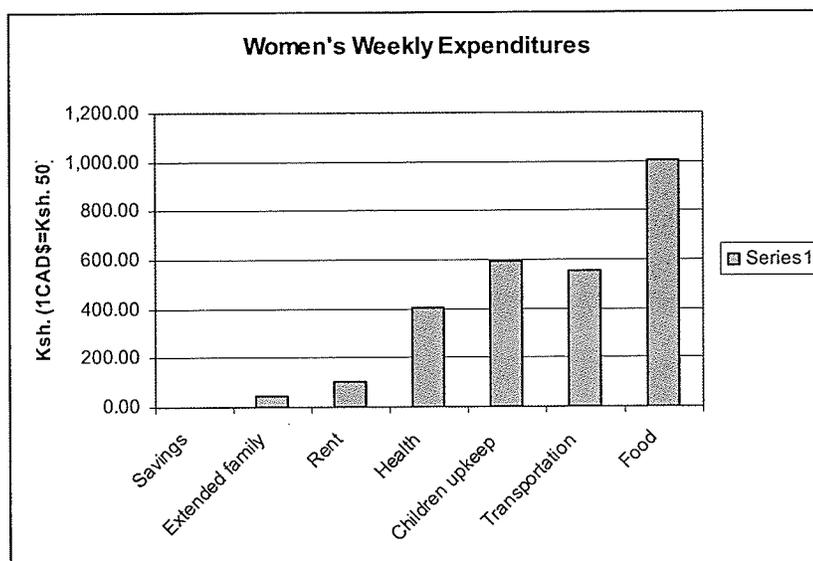


Fig. 7. Women's weekly expenditures.

The last sets of questions were for the six women who participated in the next demonstration phase. They had all practiced urban agriculture at one point in their lives – both rural and urban – and were interested in the research project. None of them had been involved in a formal savings scheme. When I asked what types of produce they would like to plant, they suggested locally grown vegetables such as kale, spinach, and other dark green leafy vegetables. They said that they would be willing to use open spaces and sites such as roadsides, riversides & railway grounds for this type of demonstration work.

All the women used mini-buses to travel to the city, and could walk if a site was chosen within walking distance from their homes in the slums.

5.3.2 PHASE 2: DEMONSTRATION DESIGN WITH WOMEN

For two continuous weeks, I together with a team of 6 women, extension workers and several labourers, were able to redesign the entire roundabout with herbs and other flowers. The first step was ground preparation where men were hired to dig up the soils in the areas where we would be gardening. After this, I arranged with a supplier of landscaping materials (Mr. Stephen Mwangi), to deliver two trucks of organic manure and fresh top soil. These were used to prepare the garden beds.

On the fifth day, I began drawing up the sketch plans on the ground with the help of the women. These living sketches were quite a challenge since the land was bigger than I had previously approximated. During this time, the local landscaper, Mr. Mwangi and I organised to have the seedlings of herbs, flowers and ground covers delivered to the site. In order to border the garden beds, I suggested using river rocks and stones to delineate each design patch. These quarried limestones were transported from a nearby town and their bright white shimmer added another aesthetic feature to the gardens.

By the following week, we were lucky because the rains had started and therefore we did not need to purchase water. When the rains would let up, we would all go out and plant the various crops according to the designs. We planted and finished one semi-circle before moving on to the next. These activities continued for five days and by the end of the second week (February 14, 2004), the women had re-greened and planted a beautiful garden.

A multi-storey kitchen garden was also completed during this time (see page 159-161). It became the centrepiece of the garden bound by two palm trees. Passers-by and motorists would stop to thank the women and within days, we had received many compliments on the work done. Details of how the multi-storey kitchen garden was built

are discussed in the Appendices section. All the fieldwork was documented in a twenty minute video (See note on page 71)

5.3.3 POST-EVALUATION FOCUS GROUPS

Post-evaluation focus groups were held with the research participants three months after our partnership. First of all, the focus group was held at the site on the last day after an intense two-week implementation process. This provided an opportunity for the women to share their views and raise any questions and recommendations they would have.

When I asked how the research and demonstration study had impacted the women's lives, they said that it was an exciting opportunity for them to earn some new skills while at the same time earning some additional money. Some of the recommendations rising from the focus groups were:

1. Hold a Seminar for their friends in the self-help group training them about the demonstration gardens and about opportunities for their participation in other communities.
2. Encourage the City Council to give permits for the legal yet temporary production of food crops on open public spaces, such as road reserves, riversides and non-developed properties.
3. Advocate for local vegetable production, which was denied for this demonstration. The women thought this would have been a good idea since they would be able to access and sell additional surplus and use this income for their household needs.

4. There was a request that funding should be sought to continue the project after my work was completed. In this same vein, they suggested that funding be sought so that they could expand these re-greening activities to multiple sites across the city of Nairobi.
5. Another request was put forward, that I provide additional equipment (watering cans and hoes) for each of the participants. These were provided at the end of the discussion to the delight of the team.

5.3.4 CONVIVIALITY: WRAP-UP PARTY

In the days leading up to my departure to Canada, weeks after working with the women, a party was held at a local school in the slum. This party included the second post-evaluation focus group. Everybody gathered one Sunday afternoon at the *Raila Odinga Educational Centre* in the heart of the slum. This was a celebratory wind-up of the research project, filled with dance, poetry and song. After the celebration I facilitated a brief discussion and de-briefing session regarding the next steps in writing up and documenting the work the women and I had done. In order to encourage continuity of the project, the women agreed to continue working on the roundabout once a week. They would develop a schedule and go out to the site. It was also suggested that I try to find funding so that they could continue to be reimbursed for their work.

5.4 LESSONS LEARNED:

In the final focus group and engagement process, the women reflected that they were appreciative of the project. They said that it had impacted them in a positive way and gave several moving examples of what they had learned or achieved:

- One participant said she was happy about the project, because she used the honorariums for medical expenses. She had used the honorarium to take her child to see a doctor, when the child was infected with chicken pox for several days.
- Another participant said she had used the income to stock up her house with grains such as corn, rice and other non-perishable grocery purchases. She was running short of main grains for her family diet.
- One participant was happy that a university student was actually interested in working with them. She encouraged me to continue with this relationship and partnership.
- Another participant said she learnt how to prepare soil for planting by mixing manure with the soils. She had never done that before but was willing to try it in her own land.
- One participant said she appreciated the designs and was actually planning to adopt similar designs from the garden for making table cloths and napkins.

5.5 SUMMARY

This is the key section of this document highlighting the contributions of this research to the body of knowledge and literature concerning gender and development. The ability to initiate a positive change stems from a planner's ability to identify key weaknesses in development processes and to create solutions that would strengthen them. Perhaps some of the information collected from the interviews could be complemented by secondary data from the census bureau or government documents. However, my goal was to make use of the opportunity to 'warm up' to the participants in the field before venturing into the demonstration phase. As summarised, the majority of women living in

slums have low literacy levels, low incomes, and no formal educational training. As a result, they have more children for whom meeting fundamental needs remains a daily challenge. It is imperative then the planners and managers involved in human settlement development plan for this section of the population by creating innovative yet simple and empowering programs.

The second demonstration phase was the most interesting and tangible aspect of the research. Financing basic gardening and re-designing of the space played a crucial role in moving this project forward. With a limited budget, however, the research project carried through within fourteen days. A combination of will power, long rains, and a dedicated team of women made this possible. After the project was finished, the entire research team was quite pleased with the result of the design at the site. Not only had it made a difference in terms of aesthetics, but it was a means of training the women to participate in various community engagements, and acquiring skills in gardening and landscaping. By the time I returned to Canada in March 2003, however, it was reported that the site was not '*as nice as it was when the student was there*' (Anonymous informant). I was well aware of the fact that this would happen. Plans to sustain the project forward were stalled due to funding. The women who had been volunteering for the study felt that their time was better spent on finding other types of activities that would generate incomes for themselves and their families. In my estimation, it would take about \$200 per week to maintain the garden. My thoughts regarding future sustainability of the project prompted the writing of Chapter 7, "*If I had to do it all over again....*," pp. 128.

The next chapter analyses the processes and methods used in all phases of the demonstration by critically identifying what worked and what didn't work while

engaging slum women in a design process. Certain questions underlie these analytical lenses – for instance, were the research methods truly participatory in nature? Were the research approach and implementation sensitive to local needs? Was it inclusive and did it promote equality and equity amongst the poor? How would a theorist such as Paulo Freire or John Friedmann measure this study against popular education or participatory planning methodologies? These are the types of questions addressed in Chapter 6, pp. 96.

6 CHAPTER VI: ANALYSIS OF RESEARCH DATA

As a means of qualitatively measuring the processes and results of the study, a multi-variate evaluation process will be employed. The main theoretical underpinning to people-centred development underlies all analytical tools used in the evaluation. The analysis tracks the demonstration study activities from Phase I (fieldwork and semi-structured interviews), to Phase II implementation at the demonstration to the last phase on post-implementation.

Analytical Methodology:

At the beginning of this thesis, various theories and literature on gender planning, development and participation were discussed, highlighting the key component for each one. After the literature review, the next chapter on the demonstration study offered the main test of those theories. The intention of developing a practical study was to generate some new ideas and knowledge on planning with women in developing countries. At this point, the next step is to analyse the research methodology and participatory process of the study. The strategy is to sieve techniques and methods used through seven lenses of meaningful participatory planning as proposed by various theorists and planners working in the field of community participation. The analysis assesses the processes and results achieved, against stated objectives of this practicum.

6.1 SEVEN ANALYTICAL LENSES

The following authors, and planners, work will be used to measure the activities of the demonstration to test the extent to which they were participatory in nature. This section complements fundamental participatory planning theories covered in Chapter 3, Section 3.2, pp. 32-35. The lenses are first described briefly and then a table identifies

what aspects of the tools the demonstration study met. This is followed by an explanation of the results in order to understand the information in the table.

6.1.1 CAROLINE MOSER'S GENDER PLANNING APPROACHES

Over the past 20 years, there have been major shifts in the development approaches used by governments when defining macro-economic policies for low income women in Third world countries (Moser, 1993, 231). These approaches are defined by the extent to which they view gender roles and gender needs. In Moser's writings, gender roles are the differing activities undertaken by women and men in developing countries. Most low-income women have a triple role i.e. women's activities encompass *reproductive, productive* and/or *community management* activities. On the other hand, men engage in primarily *productive* and *community politics* activities (Moser, 1993, 230).

Moser continues to lay a foundation for understanding gender planning by noting that women's needs differ from men's not only because of their subordination, but also their socially-defined triple roles. These needs are distinguished as *Practical gender needs (PGN's)* and *Strategic gender needs (SGN's)*.

Practical gender needs are those needs identified by women in relation to their social roles in society. They arise from divisions in labour and their subordinate position. These needs respond to immediate needs, often practical and tangible in nature. Examples of the context within which PGN's are met are in water service provision, adequate sanitation, health and employment opportunities (Moser, 1993, 230).

Strategic gender needs are those needs identified by women because of their subordination. They also rise from the gendered division of labour and power hierarchies. They may operate in a right's basis where issues such as domestic violence, equal

opportunities, body image controls are addressed. SGN's are met with the purpose of equality, challenging roles and confronting subordination (Moser, 1993, 230).

Following are brief descriptions of the five main categories of these developmental approaches based on their underlying concepts on the roles of women, and government rationales for meeting women's practical and strategic needs.

Welfare Approach: From 1950-70's.

This pioneer approach was the first paradigm used for development work involving women. In this approach, women's development is equated with their ability to become better mothers. "*Women are seen as passive beneficiaries of development. It (the welfare approach) recognizes the reproductive role of women and seeks to meet practical gender needs in that role through top-down handouts of food aid, measures against malnutrition and family planning*" (Moser, 1993, 231). This approach, Moser notes, is still popular among nations because it is easy to control and not as challenging as other approaches.

Equity Approach: From 1970-80's.

This approach was originally developed from the Women In Development (WID) approach following the UN's Women's Decade from 1976-1985. Its principal purpose is to gain gender equity amongst women. In the equity model, women are considered to play an active role in development. "*It...meets strategic gender needs through direct state intervention giving political and economic autonomy and reducing inequality with men. It challenges women's subordinate position*" (Moser, 1993, 231). This approach is unpopular with governments because it is regarded by western feminist activists as a band-aid approach to recognising and meeting women's needs.

Anti-Poverty Approach: 1970's – 1990's

This approach is similar to the equity one, and its purpose is to ensure that poor women increase their productivity in the economy. Poverty among women is seen as the main problem of underdevelopment, not their subordination. *“It...seeks to meet the practical gender needs to earn an income particularly in small-scale, income generating projects”* (Moser, 1993, 231). Anti-poverty is widely accepted and used by NGO's, governments and international bodies working in the Third World.

Efficiency Approach: 1980's – 1990's

This is the third and most dominant Women in Development (WID) approach spurred by the debt crises of the 1980's. *“Its purpose is to ensure that development is more efficient and effective through women's economic contribution, with participation often equated with equity. Women are seen entirely in terms of their capacity to compensate for declining social services by extending their working day”* (Moser, 1993, 231). This option is quite popular among government agencies.

Empowerment Approach: 2000 - onward

This is the most recent approach defined and driven by Third World women. Its principal purpose is women's empowerment, achieved through self-reliance. In this approach, a woman's subordination is understood and acknowledged as a direct result of male oppression and also colonial/neo-colonial oppression. This approach recognises that women have a triple role in society, i.e., reproductive, productive and community management activities. The empowerment model *“...seeks to meet strategic gender needs indirectly through bottom-up mobilisation of practical gender needs”* (Moser, 1993, 231). This approach is common in the third world among NGO's, but is critiqued by western feminists since the approach avoids feminist theorizing in its development.

Based on the discussion above, the following table shows an analysis of the gender planning tools used in the project. It analyses and answers the following questions:

- a) Which women's roles did the intervention *intend* to focus on, and which ones did it actually focus on in *practice*?
- b) Which gender needs (PGN's vs. SGN's) did the project *intend* to meet, and which were met in *actuality*?
- c) Which policy approach to women lay behind the intervention, and was this reflected in practice?

TABLE 7. ANALYSIS TEST 1: MOSER'S GENDER PLANNING APPROACHES

<i>Role on which project focused on</i>						<i>Gender needs met</i>				<i>Policy approach to women</i>
<i>Intention</i>			<i>Actual</i>			<i>Intention</i>		<i>Actual</i>		
R	P	CM	R	P	CM	PGN	SGN	PGN	SGN	
		☼		☼	☼		☼	☼		From Empowerment to Anti-Poverty

Source: Adapted from *Gender Planning and Development* (Moser, 1993, 233)

Key:

- R: Reproductive role
- P: Productive role
- CM: Community Managing
- PGN: Practical Gender Needs
- SGN: Strategic Gender Needs

Understanding the Table

In terms of addressing the first question on gender roles, the project's intention was to meet the *community managing* role of women, where women participated from an autonomous level in providing and maintaining resources of collective consumption, that

is, food security. These community roles are mostly voluntary and only practiced during women's 'free' time. Work performed on the project is usually unpaid.

In actuality, the project shifted over to the *productive* roles of women, where women's work is paid in-cash or in-kind. This meant that work done at the demonstration site in terms of cleaning, re-greening, planting and weeding, was pegged with an exchange-for-work monetary value considering that women participated as urban farmers and wage workers. In the end, after project's completion, there was a vivid reversion to the unpaid *community managing* role where women's collective strengths were mostly needed and required in order to sustain the project beyond its closing.

In terms of answering gender needs in the second question, the project began from an advocacy-type model (within a right's based inclination) in order to meet the women's *strategic gender need (SGN's)*. The idea of wanting to bring and draw these women from the slums and into the real city was very real in my mind. The rationale was to raise awareness among targeted municipal officials about new ideas of engaging slum women in maintaining city spaces. Perhaps they would fund this type of program, developed around community participation among low-income women.

In terms of policy approaches, the project intended to be an *empowerment* approach, but in the end, it followed the *anti-poverty* approach. The intention was to share this new idea on redeveloping public spaces for food security so that the women could be self-reliant. However, towards the end of the project, it became quite apparent that the women viewed the project as an income-generation activity. This crossed over and met their *productive* roles as development partners.

Critique:

Although the intervention was meant to transform knowledge through empowerment of slum women, the issue of market-value reimbursement became apparent once I completed the project. At the end of the week, participants expected to receive their honorariums, which all women really deemed as “income!” Months after implementation, and after I left to return to Canada, anonymous sources indicated that the project site and work at the roundabout was “*not as nice as it was when the student was there.*” I speculate that the research participants got tired of ‘volunteering’ for a project that did not meet their immediate income needs. This raises a critical issue of project development. When it stops, what happens next? Perhaps this should have been the question that I started out with before developing the study.

The income-generation perception highlights a practical reality when practitioners are involved in project involving low-income women in the Third World. The women’s immediate need is for their households’ food, clothing, shelter, health and education. The project met several of those needs through the honorarium incentives, but only for a short period of time. Women’s participation, at least in this first intervention, is driven by their ability to meet those needs in the here and now.

If I had to do it over again, I would ensure that the project was managed directly by the women’s community organisation in order to ensure continuity over the long term. I would also ensure that there was a fixed and continual source of funding (2- 5 years) in order to give the project more permanence and meaning for the women and the municipality. Funding would thus involve an active recruitment strategy for socially-responsive sponsors from all levels government, the municipality, the private sector and from international NGO’s and civic groups interested in Third World women’s

development. The project would need about \$ 5,000 annually to maintain. Any form of long-term sponsorship would give the women a sense of security and hence encourage more permanence for the demonstration study.

6.1.2 PAULO' FREIRE'S "POPULAR EDUCATION"

Brazilian philosopher Paulo Freire is included in this chapter due to his radical yet simplified methodologies and principals used when working on adult literacy in the 1950's and 1960's. In the following analysis, the project is analysed through his concept of popular education which stipulates that the conventional classroom model of teaching is ineffective when dealing with adult learners. In other literature, popular education is also referred to as "*andragogy*," "*learner-centered education*" or "*action learning*" (Vella, 1995, xi). During the 1950's and 1960's, Brazil was experiencing certain economic and political discrepancies which were similar to the social context in which this research was conducted. Freire's problem was the unequal distribution of wealth held in the hands of the elite, while grinding poverty gripped peasant rural and urban labourers (Roberts, P., 2000, 8). As in many developing countries, Brazil was also experiencing serious urbanisation issues such as inadequate housing, food supplies or water sources. Health as well as education was beyond the reach of most of the urban poor, while abandoned children resorted to the streets. All these inequalities occurred within a corrupt and dictatorial political system.

Given this social context, Freire saw and made a significant connection between illiteracy and the injustices of the ruling wealthy elite. He did not suggest that literacy would cure all the social ills in his country, but he felt that illiteracy was merely an after-effect of oppressive structural policies. To him, the rural and urban poor low levels of

literacy did not cause poor sanitation or ill health. Instead, they reflected power controls: who held power and who controlled the resources. His solution therefore was not just about increasing the numbers of Brazilians who could read and write. *“For Freire, literacy was inextricably linked with the broader process of social transformation. The very character of the literacy learning promoted by Freire was shaped by a particular conception of Brazilian reality and distinct vision of life under more liberating social conditions”* (Roberts, P., 2000, 8). The underlying philosophy in all Freirean literature is the deeper understanding of human beings, how they change over time and how they learn outside of formal learning institutions. He felt that a structured educational system was not set up to fight or challenge existing social inequalities. Freirean theory attempts to seek unifying collective and individual experience. It “implies not merely engagement with printed texts, but the development of a reflective, dialogical, practical mode of social being, grounded in a narrative of hope, an ethic of struggle, and a pedagogy of transformation” (Roberts, P., 2000, 9).

There are basic principals from Freirean theory that can be used to analyse the participation processes of this thesis: 1) The world, in its social, physical and individual aspects, is constantly changing with varying levels interactions. It is never complete. 2) Humans, by simply being human, have a unifying condition that goes beyond class, race or gender, and 3) That as humans interact with each other and with their physical environments, they shape it and are in turn, shaped. Any efforts that suggest how I might change the world can only begin by understanding this dual interaction (Roberts, P. 2000, 49).

Freire’s approach to adult literacy involved three stages: First, he began by investigating the social context in which the adults lived. Secondly, he introduced culture

by using visual aids that reflected various aspects of Brazilian life. Thirdly, he used selected numbers of words used in reading and writing. The following table summarises the Freirean approach to working with adult literacy (Roberts, P., 2000, 75-86).

TABLE 8: THE FREIRIAN POPULAR EDUCATION MODEL

Stages	Methods	Characteristics	My Thesis Research
Investigation/ Preparation	Informal Interviews Site Visit Live/work with researchers	Personal contact with adults	<input checked="" type="checkbox"/>
	Collecting words that adults used as they reflected on their lives.	Researchers critical reflections	<input checked="" type="checkbox"/>
	Codification of words with pictures that reflect their meaning or context.	Introducing visual aids such as posters or slides	NA
	Explaining the agenda (style, methods, program content) to literacy workers	Leadership and briefing research assistants on the next steps	<input checked="" type="checkbox"/>
	Index cards categorised according to different phonemic groups	Education as dialogue not 'banking' approach (deposit and withdraw knowledge)	N/A
Culture Concept	Ten pictures on culture were projected on walls of houses where people met. Images were centered around a common theme.	Artist(s) invited to take these pictures. As each image is shown dialogue is initiated. This stage was 8-week long.	N/A
Generative Words	The words are introduced. Visualising not memorising the words is emphasised. Words triggered discussion around certain issues: e.g. <i>favela</i> (slum) covered housing, land issues, health, food etc.	Learning!	N/A

Understanding the Table

The most salient aspect from Freirean theory applicable to this demonstration study was the investigation and preparation phase where site visits, observations, and clear explanations of the project were made.

6.1.2.1 JANE VELLA'S "TRAINING THROUGH DIALOGUE"

Jane Vella, another author in the school of popular education created a model from Freire's popular education. The new learning model she puts forward is characterised by:

...learners' participation in naming content via needs assessment, mutual respect, dialogue between learner and teacher and among learners, achievement-based learning objectives, small-group work to engage learners and to provide safety, visual support and psycho-motor involvement, accountability of the teacher ..., student participation in the evaluation of program results and a listening attitude on the part of... resource people and learning by doing (Vella, 1995, xi).

The following extensive table evaluates tools and techniques used in the study and analyses the extent of their coverage with regard to adult learning in popular education models:

TABLE 9: ANALYSIS 2: EVALUATION TOOLS FOR FREIRIAN PROCESSES

	<i>Popular Education Concept</i>	<i>Question</i>	<i>Yes</i>	<i>No</i>
1	Affirmation	Did the researcher make participants feel respected through encouragement, praises and positive attitude?	<input checked="" type="checkbox"/>	
2	Aspects of Learning	Was the research project successful in promoting effective learning by targeting participants' cognitive (mind), affective (feelings) and psychomotor (muscles) activities?	<input checked="" type="checkbox"/>	
3	Case Studies	Did the researcher use case-studies in inviting dialogue concerning key concepts?		<input checked="" type="checkbox"/>
4	Visual Aids	Were charts, diagrams, and sketches used in explaining the project concept and for clarifying tasks?	<input checked="" type="checkbox"/>	
5	Closure	After implementation, did the researcher end the project in a useful manner, by synthesising, reviewing and by thanking participants?	<input checked="" type="checkbox"/>	
6	Congruence	Did the researcher "practice what he preached?" i.e. did he/she participate in all research activities?	<input checked="" type="checkbox"/>	
7	Consultative/ Deliberative Votes	Were participants given the opportunity to make suggestions regarding expectations? Did they decide what they would do in terms of the project design and implementation?		<input checked="" type="checkbox"/>
8	Design	While developing the project did the implementation provide an environment for active learning?	<input checked="" type="checkbox"/>	

	<i>Popular Education Concept</i>	<i>Question</i>	<i>Yes</i>	<i>No</i>
9	Dialogue	During the project was dialogue encouraged by the researcher, as opposed to monologue or teaching-down?	<input checked="" type="checkbox"/>	
10	Echoing	Was the researcher an active listener, echoing repeating or paraphrasing participants ideas?	<input checked="" type="checkbox"/>	
11	Energy	Did the project activities encourage high energetic level and was the researcher sensitive to low levels by taking group breaks?	<input checked="" type="checkbox"/>	
12	Engagement	Did the project encourage participants to inquire, reflect, discover and practice new ideas?	<input checked="" type="checkbox"/>	
13	Evaluation	Did participants give immediate feedback on project achievement based on the initial stated goals? Did they learn what they intended to learn?	<input checked="" type="checkbox"/>	
14	Expectations	Did the researcher invite participants to indicate their anticipated expectations at the beginning of the project?		<input checked="" type="checkbox"/>
15	Feedback	Were participants invited to give their immediate and long-term evaluation of the project?	<input checked="" type="checkbox"/>	
16	Force-field analysis	Did the researcher ask participants to analyse their ongoing work in terms of a positive (what worked) or negative force fields (what didn't)?		<input checked="" type="checkbox"/>
17	Found Objects	During the ice-breaking, did the researcher ask participants to use found objects that described or represented their lives, situations or hopes?		<input checked="" type="checkbox"/>
18	Gallery Walk	As a means of welcoming participants, was there a room/space where they could see visual aids regarding the project?		<input checked="" type="checkbox"/>
19	Generative Themes	During resting breaks, or at lunch, did participants talk about ideas, issues, problems or joys they were facing as the project progressed?	<input checked="" type="checkbox"/>	
20	Group Task Maintenance	Did the researcher ask participants to be conscious about their group dynamics? i.e. Who was the task leader? Who was the voice of reason?)	<input checked="" type="checkbox"/>	
21	Humility	Was the researcher's conversation and activities with regards to participants conducted in humility?	<input checked="" type="checkbox"/>	
22	Humour	Did the researcher encourage and use humour during the project activities?	<input checked="" type="checkbox"/>	
23	Immediacy	Were participants optimistic about applying new ideas generated from the project in their own lives, towns and communities?	<input checked="" type="checkbox"/>	
24	Inclusion	Did the researcher ensure inclusion at all project phases? E.g. Did the use of a language common to all participants used in all discussion?	<input checked="" type="checkbox"/>	
25	Learning Tasks	If adults learn by doing, did participants transform project concepts and practice them in reality?	<input checked="" type="checkbox"/>	
26	Needs Assessment	Was a needs assessment performed by both the researcher and the participants for whom the project was intended to study?	<input checked="" type="checkbox"/>	

	<i>Popular Education Concept</i>	<i>Question</i>	<i>Yes</i>	<i>No</i>
27	Open Dialogue	Did the researcher encourage participants to ask open questions, thus encouraging dialogue?	<input checked="" type="checkbox"/>	
28	Preparation	Did the researcher allow a reasonable and adequate time for preparation before, during and after the project was implemented?		<input checked="" type="checkbox"/>
28	Relevance	Was the project concept relevant to the lives of the participants in which it targeted?	<input checked="" type="checkbox"/>	
30	Respect	Did the researcher show respect (and courtesy) in the participants culture and context?	<input checked="" type="checkbox"/>	
31	Reinforcement	Were participants given enough time to learn new skills, knowledge and attitudes to the point where they mastered them well?	<input checked="" type="checkbox"/>	
32	Safety	Did the researcher encourage a safe environment for participants to feel safe to share their experiences?	<input checked="" type="checkbox"/>	
33	Sequence	Did the project activities follow a logical sequence that was easy to follow?	<input checked="" type="checkbox"/>	
34	Silence	Did the researcher encourage participants to take time to reflect and provide feedback after the project?	<input checked="" type="checkbox"/>	
35	Small Groups	Were group numbers small enough to encourage full participation even from introvert participants?	<input checked="" type="checkbox"/>	
36	Note Cards	Did participants use index cards to highlight key areas of expectations, inquiries or suggestions during the project?		<input checked="" type="checkbox"/>
37	Synthesis	Were participants encouraged to "put it all together" by summarising their achievements and lessons learned?	<input checked="" type="checkbox"/>	
38	Time	Projects require generous doses of time, time and more time in order to achieve results. Did this project have time to have an impact?	<input checked="" type="checkbox"/>	
39	Title	Did participants know the project title in a clear and unambiguous manner?	<input checked="" type="checkbox"/>	
40	Warm-Up	Did the researcher use an ice-breaking technique prior to starting the project in order to draw participants to the topic?	<input checked="" type="checkbox"/>	

Source: Adapted from Training Through Dialogue: Promoting Effective Learning and Change with Adults (Vella, 1995, 151-196).

Understanding the Table

Both Freire's and Vellas' adult learning principals lay a good foundation for designing development project with adult learners. These techniques are even more crucial when working with participants with low literacy levels. The main principals that can be gleaned from the table are a combination of mutual respect between researcher and researched; active involvement of participants from pre-project development and onwards to post-implementation; knowledge-sharing, transfer and transformation; and lastly having a listening attitude on the part of the researcher.

In summary, I can deduce that the project would meet Freirean thinking on popular education, based on the evaluation. The entire project engaged participants and goals were clearly stated and defined prior to the research. All tools and approaches used were respectful and mindful of the roles of women in the planning process. The main barriers of time constraints, finances and post-project planning, were the three key areas that ultimately became the project's weakness.

6.1.3 LISA PEATTIES'S CONVIVIALITY

According to Webster's dictionary, *conviviality* is defined as "relating to, occupied with, or fond of feasting, drinking and good company" (Peattie, 1998, 247). According to Lisa Peattie, *conviviality* is an alternative to defining community and civil society. Rather than the conventional organising concepts of building community or establishing a sense of community, *conviviality* she writes, "*points to the human need to flower, to create out of the mundane materials of life a special occasion, whether it is a dinner party or a piece of political theatre presenting a vision of the future*" (Peattie,

1998,). In convivial literature, emphasis is placed on the joyful, high energy, vivacious occasions, rather than on peoples' societal roles or the contexts in which they exist.

Ivan Illich, in the work Tools for Conviviality, defines and uses the term 'conviviality' "*to designate the opposite of industrial productivity...*" He further adds that conviviality involves the pleasurable social activities that people do in "...*contrast with the conditioned response...to the demands made upon them by others, and by a man-made environment*" (Illich, 1980, 11). Those activities may include social eating, joyful singing in social settings, street parades and dances, block parties, season rituals, small group bonding in neighbourhood cleanups or even volunteer work at various levels (Peattie, 1998, 247).

Despite the soberness and seriousness attached to the planning profession, Peattie suggests that practitioners need to explore and augment their work with convivial acts in order to enhance their values and visions:

Conviviality can take place with few props: the corner out of the wind where friends drink coffee together, the vacant lot which will become a garden. But it must have some sort of material base – the right-shaped corner, the piece of vacant land and a couple of rakes – and it must have the rules that permit it. Conviviality cannot be coerced, but it can be encouraged by the right rules, the right props, and the right places and spaces. These are in the domain of planning (Peattie, 1998, 248).

In the end, conviviality is not only a unifying concept, but also a central aspect on the social structures that build and sustain true communities. Regardless of societal or cultural differences existing in the world, social gatherings whether formal or informal are an essential part of human existence. Some examples include English tea-parties, Jewish mandatory festivities, civil rights protestors street songs in the 1960's, and even Ku Klux Klan members celebrate as groups in their caverns. The Mafia too, are said to hold great Italian dinners (Peattie, 1998, 249)!

Finally, conviviality has an economic aspect, emerging out of its direct relationship with commercialization. What would a festival be without the sale of food and drinks? The truth is that commerce plays a key role and can either make or break the social occasion. However, Peattie quickly adds that people can engage in these settings with scarce resources, by using inherent skill and resource sets to their full potential (Peattie, 1998, 251).

The following table builds on and evaluates the projects activities, tools and techniques in terms of conviviality:

TABLE 10. ANALYSIS 3: LISA PEATTIE'S "CONVIVIALITY"

	<i>Convivial activities</i>	<i>Description of the convivial act</i>	<i>Yes</i>	<i>No</i>
1	Planning Design	Were the project designs, implementation, and final evaluative activities convivial, in your opinion?	<input checked="" type="checkbox"/>	
2	Group Work	Did the project encourage serious group tasks for unifying research participants?	<input checked="" type="checkbox"/>	
3	Sharing Meals	Did the entire team of participants (researcher included) engage in sharing meals in the duration of the project?		<input checked="" type="checkbox"/>
4	Song and Dance	Were there opportunities for song and dance as a celebration of the project activities?	<input checked="" type="checkbox"/>	
5	Places	Did project activities occur in other places apart from participants' homes or places of work e.g. coffee shops, community centres, parks etc.?	<input checked="" type="checkbox"/>	
6	Scale	Were convivial activities performed at both small and large scale, going beyond just the participants in the final demonstration study?	<input checked="" type="checkbox"/>	

Source: Adapted from Peattie, 1998, 247-253.

Understanding the Table

In my view, the project was "convivial." Most of the activities were performed in open settings with participants in joyous manner. Even when interviews were being administered, I worked to ensure there was an informal light-hearted mood in order to establish and create a sense of trust. The first interviews were a little bit difficult, since I

had to find a simple way of communicating in the dominant language, Swahili, on the reasons behind the study. Although I am fluent in the language, it took a few jokes and simplification of terms in order to create a safe environment for the women to answer and discuss the questions.

In terms of food, this was one critical yet basic convivial act that I was unable to perform. While in the slums, I had to limit my time during the interviews from 10am-1 p.m. A longer stay would have compromised both the researchers' and the participants' safety. One woman from the slum had warned me that if I stayed too long, other men such as petty thieves and hustlers, in the slum areas would notice and cause troubles. For instance, backpacks, wallets and camera's stayed in one of the women's hair salon, while I went out to conduct the interviews. Upon return, the next step was to get out fast, and not sit down to eat!

During Phase II, the women ate lunch together at local market out-door kiosks. However, I was unable to join them since I had to remain at the roundabout to safe-guard seedlings and equipment! It was brought to my attention, that leaving equipment and watering cans for an hours' lunch would highly attract thieves and strangers who would gladly help themselves to our property! Therefore, as 'team leader' I had to give up the lunch-hour break and have lunch on site! In future, a guard would be hired so as to release me to engage in convivial activities!

Finally, during the de-briefing windup celebration at a local school in the slum, I offered to buy soft drinks for the participants and their friends. This would have been a 'convivial' activity, sitting around desks in a classroom and having a soft drink. However, the women insisted that it was more prudent for them to be given the money to distribute among themselves. It was more important for each one to use the 30 shillings

(approximately CAD\$0.50 cents) for other food or non-food expenditures. This is one other realisation that became apparent all too soon: the immediate need for the slum women was not for self-satisfaction (sharing drinks and food as a team), but for household survival and maintenance (purchasing *food* for their families).

6.1.4 WENDY SARKISSIANS' COMMUNITY PARTICIPATION IN PRACTICE

The next analysis uses the Four Consultative Designs from the Citizen Engagement and Consultation Course manual, derived from Wendy Sarkissians' *Community Participation in Practice: A Practical Guide, 1999*. The principal purpose for this module is to promote and practice an effective and democratic citizen engagement process. These four design templates are based on key objectives selected before each study. Once this pre-project design has been identified, then consultative techniques and methods can be selected. The four templates are: communication, listening, partnership and empowerment.

The first one, communication, is mostly a linear one-way process involving the education of citizens on a particular issue. Secondly, listening, involves the gathering of citizen's opinions and view regarding a problem. Thirdly, partnership is a circular fluid flow of information shared between citizens and municipalities. Here, the role of the citizens is stronger in shaping and directing policy, although the decision making is still not in their realm. Finally, the fourth design template on empowerment denotes equitable distribution of power controls as well as the complete acknowledgment of citizens as independent of government. This is characteristic of building capacity and organisational sustainability (NACLAA, 2000, 4-2).

The table below identifies techniques or versions of tools used to engage participants in a greater extent:

TABLE 11. ANALYSIS 4: FOUR DESIGN TEMPLATES

<i>Communication</i>	<i>Listening</i>	<i>Partnerships</i>	<i>Empowerment</i>
Newsletters <u>Illustrated</u> <u>questionnaires</u> Diagrams/charts	Ideas competitions Community profiling Mapping	Action planning Art workshops	<u>Development Trusts</u> Feasibility funds
Models Interactive display Open house	Participatory editing Surveys People's wall	Community planning Design games Design workshops Field workshops	Accountability Groups Round Tables Study circles <u>Participatory Action Research</u>
<u>Site visits</u>	Vision fairs	Future search conference	<u>Asset-Based Community development</u>
Social marketing	Citizen jury/Referenda	Gaming/simulation Local design Planning for Real <u>Problem Trees</u> Review Sessions Risk Assessments Strategic Planning Cultural Planning Circuit Breaker Model <u>Visioning</u> Strategic Questioning Open Space Planning	

Note: Underlined (or check marked) techniques indicate those that were used in the thesis study (Source: NACLAA, 2000, Section 4-8 to 4-23).

6.1.5 HENRY SANOFF'S COMMUNITY PARTICIPATION METHODS IN DESIGN

Community planners should always accept that there is no single "best" solution to the problems a community may be facing. There are multiple solutions and approaches which must be explored. At the same time, stakeholders invited to a project should seek

to explore alternatives as understood by both experts and professionals in the fields, as well as lay persons endowed with decision making at a local level. In this case, the 'experts' should allow the users to "do it themselves" thus transferring ownership to the people themselves. Finally, Sanoff suggests that successful projects should be continuously evolving, changing and being changed with the passage of time (Sanoff, 2000, 13).

Some consequences of participatory methods include a sense of accomplishment, confidence building and skill development, neighbourhood improvement, domino effect in open space design. However they may tend to exclude youth and require a lot of time and energy from participants. Sanoff continues to note that there are certain research tools that are appropriate when conducting research between participants and researchers. These include site visits, personal narratives, key informant interviews and reviewing technical reports.

Sanoff's principals of community building can be summarised as follows (Sanoff, 2000, 7):

1. Involve residents in setting goals and strategies
2. Identify community assets as well as problems
3. Work in manageable sizes
4. Develop unique neighbourhood strategies
5. Enhance community values as well as building human and social capacity
6. Develop creative partnerships with city institutions

Finally, Sanoff includes a useful tool for evaluating open space gardens and parks.

The following table shows how this can be done:

TABLE 12. ANALYSIS 5: HOW TO EVALUATE OPEN SPACE PROJECTS

Evaluating Community Developed Open Space Projects (New York City)	
Description of issue for evaluation:	My thesis
• Phase and degree of community control	<input checked="" type="checkbox"/>
• Project initiation	<input checked="" type="checkbox"/>
• Size of organizing group	
• Number of key participants	<input checked="" type="checkbox"/>
• Ethnicity of organizing group	
• Neighbourhood ethnicity	<input checked="" type="checkbox"/>
• Relationship of group to other neighbourhood efforts	<input checked="" type="checkbox"/>
• Opportunities for new group participation	
• Group goals	
• Funding source	<input checked="" type="checkbox"/>
• When funding was secured	<input checked="" type="checkbox"/>
• Dependability of funding	
• Materials source	<input checked="" type="checkbox"/>
• Size & workers	
• Size of site	<input checked="" type="checkbox"/>
• Permanency of site	<input checked="" type="checkbox"/>
• Site ownership	
• Site condition prior to development	<input checked="" type="checkbox"/>
• Site use	<input checked="" type="checkbox"/>
• Site activity	<input checked="" type="checkbox"/>
• Adjacent neighbourhood/street activity	<input checked="" type="checkbox"/>
• Site accessibility to neighbourhood residents	<input checked="" type="checkbox"/>
• Location of site in neighbourhood	<input checked="" type="checkbox"/>
• Site users	
• Perception of success or failure	<input checked="" type="checkbox"/>
• Income in neighbourhood	<input checked="" type="checkbox"/>
• Neighbourhood sustainability	<input checked="" type="checkbox"/>

Source: Adapted from Sanoff, 2000, 23-24.

Understanding the table

Although the demonstration study was short term, it covered all the main areas as per the table. Most of the participation principals on engagement were used and the process was in the control of both myself as a researcher and the women driving the efforts.

6.1.6 PATSY HEALEY'S "INCLUSIONARY ARGUMENTATION MODEL"

According to UK planning theorist Patsy Healey, Inclusionary Argumentation gives attention to the needs of those who have been neglected and to activities or programs that can or cannot be achieved. The model is inclusionary in that it ascertains that civic participants' voices are not only heard, but that their rights – as far as decision making in the public arena – are honored.

A key attribute of a good decision would be that it is taken in cognizance of the concerns of all members of a political community and that these members have the opportunity to express their views, and to challenge the decisions made on their behalf, not just in the ballot box, but through rights and opportunities to challenge policies as they are developed and as they become guides for subsequent action (Healey, 1997, 237).

In principal, this model pays attention to different ways of knowing – epistemology - evident in people's culture and normative values. In fact the model not only reaches out to local knowledge but embraces collective decision making as opposed to a reliance on scientific or technical knowledge (Healey, 1997, 52, 238). An Inclusionary model pre-supposes that a practicing planner should be aware that in any given planning process (Sarkissian (b), 2004, 16-17:

- Fractures are inevitable and therefore one should work with them
- There is no such thing as correct rationality
- Consensus is something that has to be created
- A new discourse needs to be created

Before going into a participatory process, Healey suggests that one needs to be first aware of a community's differences, misunderstandings and struggles before building and retaining trust. Positive experiences are only based on trust, which is essential in planning. She also talks of knowledge: expert knowledge vs. local knowledge and expert

opinion vs. local views (Healey, 1997, 257). What seems to be regarded as *facts* may really be mutually held *values* that form the knowledge. Therefore, this leads to the openness with which a researcher is able to welcome diversity – of gender, race, and income – to bring about consensus. This then builds the capacity necessary for community-building. At the end of the inclusionary model, a new discourse is developed where participants feel safe enough to share stories about the challenges, barriers, and opportunities. The following principals show the expectations of an inclusionary model.

TABLE 13. ANALYSIS 6: PRINCIPALS OF AN INCLUSIONARY MODEL

Principal	Meaning
<i>Inclusion</i>	Cast a wide net of drawing in stakeholders
<i>Timing</i>	Provide sufficient time for the planning process
<i>Respect</i>	Be mindful of respecting others while listening and talking
<i>Integration</i>	Pursue holistic approaches
<i>Transparency</i>	Speak openly about ethical issues
<i>Accessibility</i>	Use a variety of locations
<i>Communication</i>	Use simple and clear language, avoid confusing jargon
<i>Openness</i>	Keep things open
<i>Trust</i>	Build and sustain relationships
<i>Information- Transparency</i>	Keep the information flowing between participants and yourselves
<i>Reflexivity and accountability</i>	Engage in regular evaluative reviews
<i>Transformation</i>	Look for the discursive key
<i>Professionalism</i>	Hold yourself to a high standard

Source: Sarkissian's review of Healey's propositions (Sarkissian (b), 2004, 18)

All but one aspect of Inclusionary principals were covered. Time constraints made it impossible to pursue the project further than the 16 week period. It was also difficult to conduct semi-structured interviews in the slum areas over extended hours in the day due to security concerns. However, care was taken to note pertinent information as the project unfolded. Overall, the project was inclusive and stands up to Healey's model.

6.1.7 PARTICIPATORY RURAL APPRAISAL (PRA) TOOLS .

One of the key literatures this study focused on was gender and urban agriculture. The tools and approaches for including and addressing gender issues are fleshed out in the Participatory Rural Appraisal (PRA) model (de Zeeuw & Wilbers, 2004, 3). Although PRA tools are used in rural contexts, there are many opportunities for their use in urban settings. It is the adaptability of these tools that are tested in this study.

Some of the basic principals of PRA tools are based on the notion of knowledge transformation between the researcher and the researched. As stated in the abstract of this study, the process of engaging the community was the prime focus, and not necessarily on the end-product. PRA tools are process-based, avoid formality which hinders participation and hinge on triangulation in research methods. They are aimed at group learning processes which in turn enhance capacity building and empowerment. The use of PRA tools to assess this urban planning study is not unique.

The major sectors in which PRA has been applied are: agriculture, natural resources management, health and nutrition, poverty alleviation programmes (e.g. for identification of the poor and for ranking of priorities) and village-level and urban planning. PRA has been used to identify the needs and priorities of local people, to study specific topics and for (participatory) appraisal, planning, implementation and monitoring of development programmes. In some cases RRA/PRA has also been used to analyse gender differences in a community (de Zeeuw & Wilbers, 2004, 4).

As the table below shows, the qualitative and quantitative methods of researching on gender and urban agriculture need to be carefully selected in order to collect unbiased data thus resulting in well-grounded gender disaggregated data.

TABLE 14. ANALYSIS 7: PARTICIPATORY RURAL APPRAISAL TOOLS.

Main issues	Specific tools	General tools
Division of UA related labour, tasks and responsibilities	<ul style="list-style-type: none"> - Daily activity profile - Seasonal calendar 	<ol style="list-style-type: none"> 1. Review of secondary data 2. Direct observation 3. Semi-structured interviews <ol style="list-style-type: none"> a) individual or key informant interviews b) household interviews c) focus group interviews
Decision-making power	<ul style="list-style-type: none"> - Decision-making matrix - Household budget 	
Access to and control over resources	<ul style="list-style-type: none"> - Household budget - Transect walk - Household Resource flow diagram - Benefits chart - Mobility map - Organisational linkages diagram 	
External factors	<ul style="list-style-type: none"> - Critical incident analysis 	
Constraints, problems and opportunities	<ul style="list-style-type: none"> - Problem drawing - Ranking - Problem tree, Objective tree 	

Source: Adapted from de Zeeuws and Wilbers, 2004, 7.

Understanding the Table

In this study, some of the general tools suggested by de Zeeuws and Wilbers (2004) were applied i.e. the review of secondary data, direct observation and semi-structured interviews (individuals, key informants, households) and finally a focus group.

However, none but two of the PRA tools suggested were applied i.e. household budgets as reflected in the interviews, and daily activity profiles, as recorded by myself during field work.

6.2 SUMMARY

Overall, the project holds up under all seven analytical lenses. Since this research process after implementation was reiterative, there are key aspects which summarise the project.

Firstly, the engagement of slum women in their household or working area in the slums was a positive step in reaching out for local knowledge. My on-site observation further validated the ideas about how to answer research questions.

Secondly, the attempt to pursue the project as a demonstration on a site meant that it was moving 'outside the box' by implementing and testing tools and approaches learned. This aspect of the study was the most meaningful as well as most challenging for the research team. Not only were resources used, but relationships were also forged. This partnering on the ground meant that the participants were confident in playing their role, while keeping me accountable to project goals.

Thirdly, the integration of disciplines meant that the planner had to crawl out of the confines of planning literature into other disciplines (in this case, urban agriculture), in order to develop the most appropriate project for a developing country context. This same adaptability and extension of knowledge into other fields is the necessary hallmark of planning practice.

Fourthly, the phasing of the research project into gradual yet manageable time frames meant that participants were able to know and trust me. This was key and

instrumental in facilitating the project and maintaining a steady continuity of the project up to its final ending.

However, the weakness of the project was in the post-implementation phase.

What next? In retrospect, this should have been the first step before venturing out into the field. This became quite apparent months after the project ended, once the participants no longer tended to the site regularly. This neglect was explained and blamed on non-rewardable volunteerism. The reality was that the slum women had urgent immediate needs to provide for their households and therefore, additional unpaid time spent on the project was just not feasible or attractive.

In the next chapter, I pursue these thoughts further by returning to the research questions, objectives and goals, as well as lessons learned from the research. This reflective assessment of the research methods and analysis of the research, serves as a synthesis of what worked or could have worked. The conclusions of the study are then given by detailing lessons learned and directions for further study.

7 CHAPTER VII: CONCLUSION: “IF I HAD TO DO IT ALL OVER AGAIN...”

Chapter seven reflects on research methods and critiques how the project could have been approached differently after implementation. It was developed months after the project ended and after I had returned to Canada. Here, the project returns to the research questions, objectives, goals, and research methods as well as the literature reviewed in Chapter 4 in order to evaluate and assess the study in its entirety.

The first section critiques the analytical methods used and discusses how these approaches could have been better deployed - in order to generate greater participatory outcomes. The seven lenses are divided into two groups that summarise overarching themes in the literature. This section is complemented by material discussed in the literature review in Chapter 4.

The second section features my personal reflections on the fieldwork from a western-trained foreign planning student's eyes. I highlight difficulties encountered such as limitations related to language, project permanence, etc.

In the third section, I review the objectives of the project by reviewing my initial intentions when designing the project versus outcomes at project's completion. This is in keeping with Caroline Moser's literature on post-project evaluation (See page 96).

The fourth section returns to the three key research questions posed throughout the document. To what extent did the study offer answers to these research questions?

The fifth section on lessons learned draws its content from student commentaries on a presentation I gave to an undergraduate Environmental Design research methods class in the Faculty of Architecture, University of Manitoba.

Finally I end the thesis by highlighting recommendations for the planning profession in both developed and developing countries. Emphasis is placed on people-

centered development paradigms that embrace participatory methods and celebrate their catalytic effect on practical gender development programming in the developing world.

7.1.1 REVIEWING THE LENSES

7.1.1.1 Group A: Participatory Planning and Theory (Moser, Freire & Vella, Healey)

What challenges does a project face when morphing from a theoretical stand to a purely practical one? According to Moser, Freire, Vella and Healey, planning projects will almost always face uncertainties, and planners are therefore required to be flexible and adaptable to changing situations. In participatory planning, different biases and attitudes emerge as people join efforts to make a project work. Being aware of these biases among key stakeholders prepares the planner to engage different parties in meaningful dialogue and conflict resolution.

In the first group of theorists, one notes the generation of new knowledge as one of the key principals that must be attained through planning projects (Sarkissian, 2004 (b), 15). While conducting the study it became clear that apart from narrowing down on a segment of low income population, the project went further to target the most vulnerable in Nairobi's slums, i.e. the women and children. As Sarkissian argues:

The inclusionary model seeks to identify those who could have a 'stake' in any situation and cast the net as widely as possible. It is generally accepted in participation practice that there is no objective way of identifying the 'universe' of stakeholders, still less of getting access to them (Sarkissian, 2004(b), 18).

The difficulties of working with slum women are many. Not only is access to information regarding slums largely unreliable, but so are the practical constraints of meeting and interviewing the right people. Timing was critical in identifying the right

sample to study. Other practical hindrances such as safe times of the day for interviewing also limited me in finding slum women in their environment. Interviews were limited to only 3 hours in the day from about 10-1pm. As researchers, working outside of the slum would have posed security threats of harassment and theft.

The women farmers you are looking for are not here. They come early in the morning to farm, and by now (11 am) have already left. If you want to find them, come back tomorrow at 8 in the morning. (Interviewee, January 22, 2004).

When looking back, I feel that perhaps living in the slum for a short period of time would have increased access to the women not only to gather information, but also to build relationships of trust. This temporary relocation, however, would be a much more difficult step for me to take.

In addition, another challenge was finding out that the intention of the study as per Moser's literature became quite different from the outcome. The intention was an empowerment model, but all too soon, it became an anti-poverty model which aimed to increase women's income (Moser, 1993, 231).

If I had to do it over again, I would ensure that the project was managed directly by the women's community organisation in order to ensure continuity over a long term. This would also ensure that both the income generative aspects of the anti-poverty model would grow into the empowerment approach once the project is in the hands of the slum women. Gradually empowering them over time would face out my role thus truly reflecting knowledge transformation. I would also ensure that there was a fixed and continual source of funding (2- 5 years) in order to give the project more permanence. Funding would thus involve an active recruitment strategy for socially-responsive sponsors from all levels government, the municipality, the private sector and from international NGO's and civic groups interested in third world women's development.

In the end, just like Vella and Freire who worked directly with participants, it can be concluded that this project recognized the role of open dialogue. One of the key strengths of the study was the creation of a safe environment for stories to be told, by women, who shared their lives regarding the slums, their joys, fears and hopes for the future. In fact, it was during 'breaks' that some of the women opened up to discuss their problems and experiences in the slums. These 'off-cuff' impromptu talks revealed the women's local knowledge and intellectual capabilities in understanding urban issues. This is where real learning took place.

7.1.1.2 Group B: Participatory Methods (Peattie, Sarkissian, Sanoff, PRA)

If I could this again, I would organise the entire study around conviviality. Peattie's literature on conviviality would be a great organising framework and could have nurtured a safe environment for real learning, as discussed previously. This informal and relaxed environment can be a place of gathering more information about issues and problems that may not necessarily be raised during a face-to-face interview or when administering questionnaire. Conviviality would first take place at the beginning of the project in the form of workshops or seminars for participants, their families and friends. This would be an excellent opportunity to introduce the research project and to share information relating the topic. Subsequent meetings organised around conviviality would explore participatory tools allowing women to share their ideas and concerns through dialogue, dance, drama or celebration. Throughout the project, conviviality can be incorporated in daily or weekly activities centered on sharing of food.

Undoubtedly, conviviality would not only draw people towards a common cause, but also encourage, motivate and empower participants. If convivial programs take place

at the end of the project, small focus groups would be good platforms to consolidate ideas and lessons learned. Such an event could also be augmented by an awards ceremony where exceptional participants, project partners or community volunteers are appreciated. In this case, the slum women would receive monetary tokens, gifts in-kind, gift-certificates for a local grocery store etc.

Also in reviewing the study, the project could have been designed around Participatory Rural Appraisal tools as discussed in Chapter 6. Some of the tools that could have assisted me in understanding women and their access to resources include daily activity profiles, transect walks, household budgets, as well as household interviews. These activities would have better informed the data collected from the semi-structured interviews.

In retrospect, this second group of lenses revealed the importance of community building activities that many not always be the first selection on a planner's agenda. For instance, Sarkissian's tools for participating with children would have been adapted to meet the needs of low income women. These would include, a day with a camera, barefoot mapping, edible model, storytelling, vote with your hands etc. (Sarkissian (c), 2004). Depending on which tool is used, the level of participation would be increased regardless of how little education participating slum women would have. I believe that these and others such as those by Nick Wates (200) would have really enriched the project even further.

Sanoffs's principals of community building were met in the study. I did involve residents in setting goals for the demonstration study, I worked in a manageable size, the project was unique, I enhanced community values such as building human and social capital and finally the project created partnerships. However, Sanoff's literature also

showed how projects can measure the level and type of participation they engage people in. The table below describes these levels of participation:

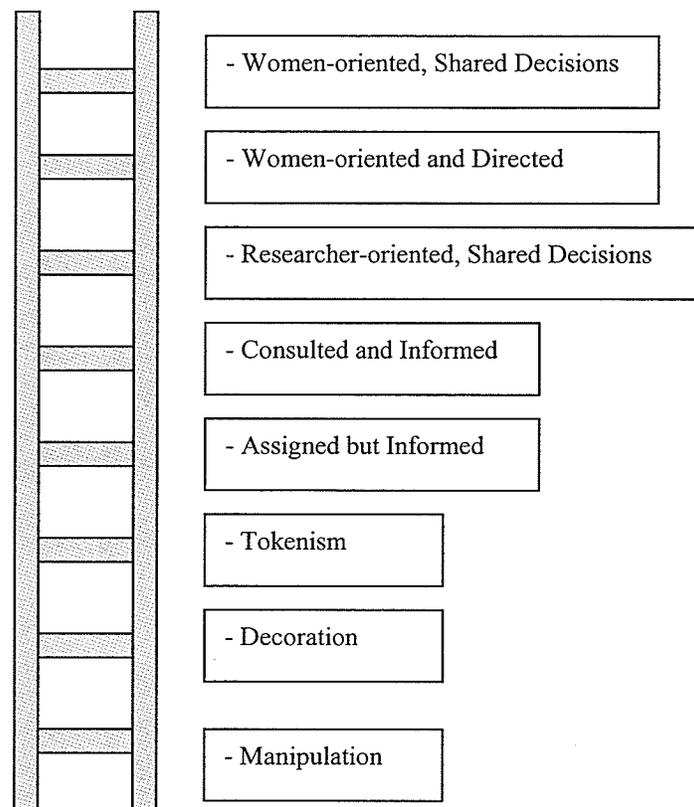
TABLE 15. LEVELS OF PARTICIPATION (Sanoff, 2000, 8)

<u>Pseudo-participation</u>	<u>Genuine participation</u>
Domestication – Involves informing, therapy and manipulation	Cooperation – Refers to partnership and delegation of power
Assistencialism – Includes placation and consultation	Citizen control – Which means empowerment

From this table, I think the intent was genuine participant cooperation and citizen control as was evident in the way in which slum women were engaged in the project. For the duration of the time in which the project lasted, there was a certain amount of genuine participation. However, I am not as confident in saying that the process was 100% empowering, that is, citizen controlled, since the site lacked maintenance and became derelict when I left and when funding ceased.

Another way of critiquing this last group of lenses would be assessing the level of participation using Hart's ladder of children participation. Below I've adapted this to the ladder of women's participation in order to refocus the critique:

Fig. 8. Women's Ladder of Empowerment (Adapted from Hart, 1997, 81).



From the above ladder, the project was able to go up to the “Women-oriented & Directed” rung. This is because there were clear and agreed upon goals that were set, good group dynamics, a clear definition of responsibility, continuity and commitment by participants (for the duration of the project), as well as a diversity of skills and experience acquired by participants. In many ways the project nurtured a sympathetic community climate which was key in understanding the problem.

The one aspect that did not reach full citizen control was in that of project ownership and stewardship. There needed to be more avenues for the women to be involved from decision-making, funding and the entire development process. In collaboration with the community and other partners, I could also have done a rigorous fundraising strategy to sustain the project. It would also have been useful to invite the

participation of large numbers of volunteers for physical work. Students, youth and the business community would have a place to show their solidarity and community spirit.

7.2 FIELDWORK EXPERIENCES

One of the lessons I learned from the fieldwork is that it takes more than theory in order to interact with the public. A researcher has to be adequately prepared with community engagement techniques suitable for the location and persons one would be working with before getting into the field. Although going in with an open mind and a clean slate without any previously held misconceptions was a great experience, I feel that the project could have gone further if more organising and communicating methods and tools were used. Community mapping could have given an indication of site considerations, model making, could have produced participants design well before the implementations, site visits or presentations on other gardens could have diversified the knowledge further to both municipal authorities and participants. More could have been done to visually communicate the goals and objectives of the project. It would also be convivial if the daily or weekly activities had a sharing of food together.

One area that was quite interesting was the barrier through which language can bring when conducting research. Although quite fluent in Kiswahili (the language in which the interviews were administered), I quickly realised that it was difficult to translate concepts such as “urbanisation,” “globalisation,” “gender,” etc. I had to find other ways of explaining the topic areas covered in the study with simple terms that would not have watered down the richness and meanings of those words. I had not considered vocabulary as a barrier but discovered only when I administered my first interview. This situation was quickly resolved when I was accompanied by two

agriculture extension (service) workers who had conducted many surveys in the slums.

After being tutored by them for the first five interviews, I was able to conduct the interview myself after picking up introduction cues and Kiswahili grammar related to this study.

Language is a tool for communication but it can also be alienating. It would have been this study's greatest compliment to have the same women critique and offer advice on this document. However, when literacy levels are low, and where majority were not able to fully communicate in English, the document would have to be re-written in Kiswahili in order to really impact the community. In spite of it being in Kiswahili, it would still not have been accessible to the majority of women whose average level of education was grade 3 level.

7.3 OUTCOME VS. INTENT: OBJECTIVES CHECK

The objectives of this study were to:

- Re-green and improve the image of an open city space with functional plants.
- Empower urban women by training them in good practices in gardening, landscaping.
- Raise awareness on accessibility of locally grown foods for subsistence and marketing.

On reflecting after the project was implemented, I can see that the first two objectives were met during the research. The site and the women were engaged in a small scale intervention and had learned more lessons about their place in making the environment a better place. The last objective that was mostly influenced by urban

agriculture literature was an experimental task of integrating a rising development discipline with mainstream urban planning. This was in keeping with UA strategies and suggestions for bridging the UA with planning.

Urban planners can incorporate UA into landscape and urban design serving other primary purposes, such as aesthetic purposes (e.g., use fruit-producing trees as ornamental or street trees) and can encourage this practice on private land in planning policy. Demonstrations of how UA can be incorporated in this way should be offered in the green spaces and parks of the city (Quon, 1999, 39).

During the application process for a permit to conduct the study's demonstration, one of the main challenges was to present to the municipal authorities the validity and opportunities for making greening initiatives functional for both the city and its residents. Ideally, a permit allowing for community gardening on a public site would have provided the participants with access to local food crops while simultaneously supporting the city's 'beautification' program within the Department of Environment. Although the permit restricted the growing of vegetables, the city was quite open to medicinal or herbal plants. This was a step in the right direction.

In future, the next step would be to conduct a similar project on a site closer to residential areas, or even in a rural municipality, which may have fewer restrictions on the planting of vegetable crops in city spaces.

7.4 ANSWERS TO RESEARCH QUESTIONS

In this section, I reflect on how the three research questions posed in the study were addressed and how the knowledge generated helped in answering them.

7.4.1 PLANNERS' ROLE IN WOMEN AND DEVELOPMENT

Research Question 1: Why is women-focussed research, programs or services effective in poverty alleviation in African countries?

Why women? Because they are the foundation of development in many African countries, Kenya included! Women are also the majority household providers. Like one proverb states, "Educating a woman is educating a nation." Investing in the education of women in agricultural production, income generating activities, and employment in various fields makes a significant difference in building capacity of communities. In essence, strategies aimed at reducing women's poverty need to target development efforts in a useful, practical and functional manner.

As cities continue to urbanise, there will be an increasing need to invest and empower poor women so that they are better able to care for their households living in those vulnerable areas. It is ironic that the needs required appear so basic: education, food access, affordable housing, access to credit and a safe environment for living and working. There are many projects and NGO's addressing these issues and it is time for all levels of government to be involved in spearheading policies that will enable the propagation of such programs. Other radical projects that fight for women's rights to land ownership and household property should also be seen as areas that can be incorporated in demonstration studies.

Among the poorest, those who lack access to rural land are the most threatened, and this included many female headed households who lack the right to inherit rural land according to custom (Lee-smith & Lamba, 1998, 30).

In many countries, social or religious restrictions do not permit women to control resources, yet she is demanded to provide and meet the needs of her family. It is

imperative then, that planners address the issue of women in the developing world since much of the success of development efforts rests on the shoulders of enabled women. Poverty reduction then, could be seen as a turning point in improving the quality of lives of not only women and children, but also other members of society.

7.4.2 ACTION-ORIENTED/PEOPLE-CENTERED DEVELOPMENT PARADIGM

Research Question 2: How can urban planners in the developing world successfully and sustainably create and adopt an inclusive development paradigm that meets the needs of the most vulnerable members of society i.e. women and (by extension), children?

Planners must first learn how to be inclusive, visionary and emphatic in developing programs, policies and projects that meet the needs of the vulnerable populations in their cities. This learning can only occur if there is a willingness on their part to step out of the box and reach out to other disciplines and fields whose goals are similar to urban planning: physical development, ecological sustainability, social and economic equity etc. There is room for relevant fields to convene and flesh out viable and creative projects. However, the group learning environment is an open one, and extends to the public who should be invited to share and offer their opinions on how they would want to effect change.

When planners in developing countries create pro-poor, gender sensitive development policies and legislation, they create open forums for academics, communities and businesses sectors and the general public to engage and lift up women's status and clout in society. These policies would break down cultural and traditional customs and practices that paralyse women's meaningful involvement.

7.4.3 ALTERNATIVES ON URBAN DEVELOPMENT IN LESS DEVELOPED COUNTRIES

Research Question 3: What role does Urban Agriculture play in Third World development, in the face of increasing urbanisation?

According to the Urban Agricultural theorists, the prevailing barrier to increasing food security in the developing world is a planning profession that is insensitive to urban agriculture through restrictive municipal bylaws and zoning regulations. However there are various ways in which the planning profession can integrate urban agriculture (Quon, 1999, 33). Some of these strategies of integrating UA in planning include organisational changes such as:

- Allocation of clearly defined institutions for Urban Agriculture e.g. departments within a municipal organisational structure
- Allocation of resources to fund UA programs and to follow through with enforcement
- Offer micro-credit incentives for farmers through cooperative loans and/or grants
- Collect quantitative visual documentation of UA activities (land banking) with programs such as Geographic Information Systems (GIS).
- Creating enabling zoning and bylaws that enforce UA activities as well as monitoring systems
- Planners can also use policy by demonstrating alternatives in Urban Design

However, despite much research and creative programs into UA, there most influential and long term approach to integrating UA lies in the confines of enabling legislation and flexible policies. The planning profession then is called to mediate between members of communities engaged in UA as well as the decision makers in order to create legislation that meets the needs of the neediest populations (Quon, 1999, 44).

Some of these policy changes include:

- Making UA a priority in land use planning particularly in the developing world.

- Adopting favourable zoning in development plans to accommodate UA
- Regulating by-laws that restrict certain aspects of UA e.g. type of crops grown.
- Regional development as a guiding principal to broaden UA's positive impacts

The most important lesson for municipal authorities is to facilitate a positive shift in attitudes towards urban agriculture and greening activities. Previously held misconceptions on UA have limited and restricted its growth on the development scene in less developed countries. However, by educating the planning profession on the benefits of UA, several African cities such as Maseru, Lesotho; Stockholm, Sweden and a handful of others have shown how easy attitudes can be addressed (Greenhow, 1994, 1). Key lessons learned from promoting UA as a viable planning activity include:

- Educating the public on the benefits of UA in a city
- Community participation in the planning process
- Educating politicians on the positive effects on UA on communities
- Educating practicing planners on alternatives to urban development

In developing countries, urban planners will constantly be faced with the need to find and capture alternative ways of developing their cities, in the face of increasing migration and urbanisation. When the potential benefits of urban agriculture are retained in development plans, social, physical and economic community planning goals will be met (Quon, 1999, 30).

To conclude, the research questions were answered and generated even more question as documented in the subsection on "Further Research." This next section highlights lessons learned during the study and offers recommendations and changes that would be made.

7.5 LESSONS LEARNED

Upon returning to Canada to write up the thesis, I had an opportunity to present research findings to a research methods class of Environmental Design students in their final third year of the multi-disciplinary undergraduate program at the University of Manitoba. In this presentation, I introduced the concept and explained the methodology used in the study in order to highlight how research was used from the classroom and implemented in a physical setting. This seemed to have been quite an inspiration for the student's since most would have been considering applying to graduate school following their graduation.

In the following section, I address and explain questions and comments given following that presentation. Lessons learned were then drawn from feedback given to the students.

7.5.1 QUESTIONS AND ANSWERS FROM COLLEAGUES

1. What was your process in formulating such a research project? What led you in this direction?

The main concept and idea of the project began earlier in my academic learning as an Environmental Design student at the same institution. I had always had an interest in slums and improving these dilapidated settlements through affordable housing and design. Later on, while in graduate school, I was exposed to the myriad of opportunities and strategies that could be used to work with the people living in these communities. Therefore, upon further reading on African development, poverty and gender issues in the region, I proposed an integral approach to urban planning for the developing country

context. I felt that I would have a better learning experience by reaching out and working with the people who lived in these slum areas. This was the most rewarding encounter that has continued to shape my thinking.

2. *What would Njeri have done differently when working with the women?*

I would schedule a longer timeframe for educational input such as workshops or seminars where specific participatory tools would be tested. I would also have opened the project to a larger number of women from the community. All these however, would be depended on securing project financing from local and private donors. I would make it more than just a demonstration by developing the project for a longer term. This would have a greater impact on women and the lessons learned from the tools and methodology would have greater credibility.

3. *“What surprised me was how, without an assigned or self-appointed leader, the community was not motivated to maintain a project that benefited them directly. Does this have to do with the notion that groups need a leader in order to remain motivated? Or does it have to do with a shortfall in the design itself?”*

Groups do need leaders initially for facilitation and knowledge sharing. It is what happens after the leader is gone that really determines a project's success. According to the women, their commitment was to continue working on the gardens long after I left for Canada. However, sources on the ground notified me that they had not lived up to their word. Disappointingly, I was not surprised since their commitment was dependent on receiving honorariums. Once I left, this meant that their additional 'source of income' ceased and therefore, their participation was solely on a voluntary basis. Moreover, when working with persons in the low-income bracket, the most immediate and pressing need

is to provide households' basic necessities. Time and labour is rather spent on tasks that can produce some financial reward on a regular basis.

The design itself could also have been reconfigured for minimal maintenance. The earth as a whole is constantly moving and changing, and so do the soils and plants. Although pristine and clear cut once I left, the same garden over time, grew weeds and the grass overgrew – the earth did what it had been doing all along. Changing! This dynamic evolution should have been understood before implementing the design so that it would have a longer lifetime on the roundabout. For instance, perhaps a wild garden with local plants would have worked as well as including drought resistant crops that need little watering. All these could have made a difference.

The centre piece for the design was also a problem. Although the multi-storey kitchen garden was the educational piece sought after, it became an attractive meeting point for wandering street youth. These boys, feared by residents for their drug abuse, alcohol and crime, found a neat little spot to hang-out, eat and sleep! This is perhaps an opportunity for another thesis study!

4. If you would have involved wealthier (mid-high income) participants, how successful would your project be?

Including population from a mid to a high income population would have deflected the project from its objective which was to improve access to local food to a targeted low-income women population in the slums. A formal design process would have worked as an addition to a housing development scheme where the aim would be access to organic produce in a high-fashion design aesthetic. This would have probably resulted in a landscaping venture that targeted designers working for profit in urban design projects in Nairobi. This would have been a completely different study altogether!

5. *How do women feel about the design?*

One woman was so impressed with the designs that she decided to adopt the same for sewing tablecloths and mats for selling. This was quite inspirational since women from other low income communities would generally produce arts and crafts as a micro-business venture for sourcing additional income. This aspect could be followed up in a future project so as to include a community economic development scheme to an existing design project. This is also a possibility for a PhD study.

6. *Are there designers....redesigning some parts of the city to make them cleaner and safer for residents?*

The private sector has had a hand in the resurgence of civic responsibility and pride as it relates to city spaces in Nairobi. Although congested with people and traffic, there continues to be a growing hunger for recreational green space from city residents. Simple street lighting of major highways for example, has been initiated by a joint private-public project called *Adopt-a-Light*. This private business encourages corporate bodies to adopt a light by financing the cost of the poles and bulbs, in return for advertising rights mounted on each pole. The municipality then makes money from these advertising rights, for approval of these streets lighting on major municipal roads and highways.

There have also been landscaping designs for roundabouts sponsored by private companies and thus allowing for advertising billboards. Although contracted by landscaping design firms, the resulting work is monopolised by those who can afford the enormous cost of redesigning derelict roundabouts. If I would do this again, I would approach a corporate sponsor to assist in paying the women and I would also approach

the media for publicity on the social-development on the proactive and superb work done by courageous low-income women.

7.5.2 RESPONDING TO STUDENT COMMENTARIES ON THE STUDY

7.5.2.1 RESEARCH PROJECT PROCESS

The most important aspect in the research process was to engage with the women in a meaningful process by reaching out to and using knowledge garnered from my education and applying it to an actual project. The slums are a major issue in the future of most developing countries and focussing on women and food security was just one slice of the larger picture. If this was a housing project, I would have proposed an upgrading project using sustainable design layout and using local materials and resources. However, I wanted a project that contributed to the existing upgrading literature on the significant contribution women make when programs are designed to create employment through local development initiatives.

The table below captures the sentiments felt by students regarding the inclusiveness and adaptability of the research process which were by far the most important lesson learnt.

TABLE 16. ED STUDENT COMMENTARIES ON MY RESEARCH PROCESS

<p>“I liked how she attacked the issue in both theory and practice” (ED, 2004). ***</p> <p>“It was interesting how Njeri used design as a solution to solve the problem of hunger and low income in third world countries. If I had been asked to solve that same problem based on the same facts, there is no way I would have been able to contemplate a solution that could work as well as this one could.” ***</p> <p>“Perhaps the notion of representing larger world issues in small scale design interventions has been the most important realization I have had through the experiences of speakers like Njeri.” ***</p> <p>Stakeholder interest- “If stakeholders are not suitably engaged, they won’t commit themselves to the project in any meaningful way. Njeri did a great job of mulling this over after her project was done.” ***</p> <p>“Her scheme served to create a sense of propriety among the inhabitants because her design responded directly to their needs especially the need for healthful and inexpensive food.”</p>
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7.5.2.2 DESIGNERS AND PLANNERS’ ROLES

The design professions have a critical role to play in improving both the built and the living environment of people in cities. Apart for resource provision of municipal services, planners have a role of adopting and implementing good governance policies that enable them to plan cities that are inclusive, safe and sustainable. Planners,

...need to approach urban development by articulating social, environmental and economic performance, balancing the goals of urban poverty reduction, the improvement of environmental conditions and the promotion of urban economic productivity... (Allen & You, 2002, 31).

In this regard, designers can use their expertise in understanding built environments and creating spaces that are not only aesthetic, but that are also functional.

There is also the notion of ‘Edible Landscaping’ which essentially advocates for the production of food producing plants such as fruit trees, vegetables, herbs, nuts and

plants on constructed or residential space. It is an aesthetic yet functional means of landscaping cities (Relf, 1997, 1; Quon, 1999, 8). My project augmented this with a social development component by inviting local women into the project. This project, just like the Haitian model, was effective in integrating design with urban agriculture in an attempt to solve part of the poverty problem in the developing world. The table below shows what student's views regarding design profession role in urban development.

TABLE 17. STUDENT COMMENTARIES ON DESIGNER'S AND PLANNER'S
ROLE

<p>On beautification: "...these projects do an amazing amount to the character and images of cities along with building a sense of community." ***</p> <p>"With the planet changing in climate and greenhouse gases being emitted constantly everyday...the addition of adding greenery [or] beautification of cities in Africa improves the overall image a biased world may have..." ***</p> <p>"I learnt that...economic and social problems can be partially addressed by and through designers and planners." ***</p> <p>"Designers should push harder to implement beneficial ideas to better the situation. As Njeri mentioned, possibly the private sector may take over the project and continue to offer the resource to the community." ***</p> <p>"One aspect that I have learned from Njeri is the fact that design proposals on paper never perfectly translate into the physical realm and therefore I have learned that one must expect this and be able to deal with issues that come up in reality which do not come up in the design process." ***</p> <p>"The most successful design projects, whether a building or a market garden, cannot be judged upon completion, but rather should be judged many years down the road. A successful project will continue to involve the community and will in time, become an integral part of the community." ***</p>
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7.5.2.3 FURTHER RESEARCH

The concept of designing open spaces for landscaping through urban greening will make an impact in the future as cities expand and are faced with reduction of land for food supply. The onus is on planners to begin to identify and sustain low-cost projects that are crosscutting and that meet selected aspects of slum women's physical, social and economic development. I would certainly pursue the research further by looking at ways of long-term sustainability of a project such as the one conducted. Some of the questions that would drive such a project would include the following:

1) Why (and how) can planners and design professionals develop and sustain long-term urban poverty reduction schemes targeted for vulnerable groups, namely women and children? I would like to pursue this project further by focussing on the transformation of design literacy from education to social justice concerns. The design profession has a great role to play in adopting new innovative solutions for city needs. It would be interesting to document successful projects that focus on vulnerable women and children through simple community economic development programs and services.

2) How would financing such a project develop over time and who would be the ongoing supportive stakeholders? Financial sustainability is directly linked to sustaining a project. In this type of study, it would be important to clarify stake holders' priorities and responsibilities towards developing such a project. This is probably one weakness from my research study since financing was not carefully thought out as it should have.

3) How would participatory approaches be transformed from community engagement to strong advocacy for pro-poor enabling policy and legislation on urban development? This question relates to Participatory Budgeting in Proto Alegre, Brazil, where more than 45,000 people meet annually to discuss and allocate public expenditure

for communities and programmes. New approaches to the Brazilian practice now involve citizens in strategic planning for the city's master plan (Allen & You, 2002, 198). This is an example of how participatory approaches move past lip-service to tangible management of public funds and redevelopment of city spaces *by* people, for priorities collectively decided upon. Studying how this practice of Participatory Budgeting grew and developed would give insight as to how to replicate and adapt the key principals and organising/institutional aspects, onto projects that are run by low income women through design with support of local government.

4) What type of demonstration study would planners in a developing country design (using existing or amendments to by-lays) in order to showcase an inclusive Local Agenda 21 plan? Using literature and information addressing the above questions, I would engage planners in developing and possibly implementing a demonstration study that would encapsulate these key sustainable and long-term principals through a 5-year project that would target a specific population group (women and children or youth) and a recurring problem (such as HIV/AIDS or food crisis in Africa). The important aspect would be in integrating lessons learned from the thesis research and to develop a stronger and well grounded project.

A future design and research project would continue to enhance the importance of women focussed research as well as the multi-disciplinary approach to urban improvement. It would still be concerned around slum and squatter settlements, but it would move beyond the African context to Latin America and Asia, continents which have attempted to solve the slum upgrading question through interesting interventions. I would also focus on the community economic development capacity of slum women by

studying the successes (and challenges) of the Asian examples of micro-credit services for small business, housing subsidies and education (Datta et al. 2002).

In summary, the following table highlights comments given by students regarding the future of this thesis. Most of the sentiments revolve around continuing the focus on low income women through design projects:

TABLE 18. ED STUDENT COMMENTARIES ON FURTHER RESEARCH

<p>“I hope she continues her work on her “Roundabout Vegetable Garden.” ***</p> <p>On vandalism: “Unfortunately as with many public projects, there is always the problem of vandalizing. It was interesting to see the differences in culture, and see that the main cause of destruction was drunk drivers. Here in Winnipeg...it would be destroyed by other people or teenagers.” ***</p> <p>Post Implementation sustainability: huge personal workloads/distance from site/ lack of volume of usable crops {could it be a location problem? Too far, too urban/or, women’s time and commitment to other tasks/Or is it purely a financial problem?} ***</p> <p>Globalization=Exploitation ***</p> <p>“I feel as though the space should have been near to their slum area. This would give the women a better opportunity to take care of it. With the roundabout the women would be looking after a space that they could not see and enjoy everyday. However, getting the women to participate in tasks that foster working together and growing vegetables and herbs is an excellent idea. This is a step in the right direction of giving the people in slums an activity that they can gain from. It will be interesting to hear what Njeri’s next steps are.” ***</p>
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7.6 SUMMARY

Key lessons to be learnt from this thesis are:

TRUST: The element of trust as discussed in CDRA’s people centered development states that planners need to build meaningful relations with a community. When vulnerable women are able to look at a researcher who is honestly interested in

improving their conditions, then the same women are enable to trust the process and thus commit to it:

...An engaged, authentic approach to relationship is a prerequisite for a developmental practice, rather than the current propensity for simplistic procedures, participatory tricks and managerial techniques. The more we work on, and through relationship, the more we connect all of us to more of ourselves. And this, surely, is development itself (CDRA, 2003, 23).

COMMUNICATION: A variety of communication tools are necessary in order to create dialogue. Rich information can be collected from semi-informal research tools in order to start building trust. Unless a researcher is open and willing to learn from participants, then valid communication remains one-sided. There should be a consistent flow of communication between the researcher and the researched.

INTEGRATED PLANNING SYSEMS: Poverty reduction programs and services are complex since many issues are interrelated: unemployment, heath, housing affordability, literacy, food security etc. This study showed that there are possibilities of exploring integrated planning whose interventions address multiple development concepts. This mode of thinking - when acted upon from a regional perspective and when supported by organisational restructuring of municipal institutions - would be a first step towards improving the lives of women and other vulnerable people groups.

SIMPLICITY = SUCCESS: Perhaps the most telling lesson was that of simplicity in project concept and implementation. Although there were bureaucratic hurdles to jump over, the study's objectives were simple, adaptable and could be more sustainable given ongoing support and resources. The case of urban agriculture would not normally be considered by the design professions as a development tool.

ALL THINGS ARE CONNECTED: Canadian municipalities have addressed food security topics in their city planning endeavours. They have shown that strengths exist for entire communities and cities by linking food access and nutrition and their impacts on urban planning. Some of these community initiatives are successful due to favourable food policies advocated by food security activists. A good precedent is Toronto's Food Policy Council which has over the past decade been active in promoting equitable food systems through various initiatives ranging from community gardens and urban greening, environmental conservation, health and nutrition, agriculture and wetland preservation etc. Planners are particularly called to begin addressing food security issues in their official development plans).

Air, water, food and shelter are among the essentials of life. Planners have been involved in efforts to improve the quality of air and water through pollution control programs and more comprehensively in shelter planning. But the fourth essential, food, has been virtually ignored by planners (Pothukuchi & Kaufman, 2000, 113).

Planners in developing countries have a lot to learn with this regards and the opportunities for this kind of integrated planning would have far reaching positive impact on the lives of millions of peoples who struggle with hunger and food access in congested cities.

EDIBLE LANDSCAPING: If planners zoned their city spaces to protect food resources in addition to conservation planning, ecological and recreational land uses, then city managers would be more inclined to include the edible landscaping as a part of their beautification strategies. When this is combined with youth or women development, and when it has a community economic development component, edible landscapes can

become cost-effective means of improving city spaces and thus contribute to the well being of both the built and the living environment (Relf, 1997 (b), 1; Roberts, W., 2001).

In conclusion, this study proposed to planners from developing countries to widen their impact on city planning by looking for collaboration with other disciplines in creating simple yet, practical solutions for their residents. In particular, the study showed how slum women can be engaged in implementing an edible landscape within a city space. Perhaps, if more of these vegetable gardens were permitted, supported and replicated to various parts of the city, the women, men, and children producing them would have better access to nutritious foods, generate additional income through the sale of surplus produce and they would contribute to good citizenship and city stewardship.

Although, the issues affecting slum areas are considerable, there are a variety of specific ways in which individuals, communities and all levels of government can help to improve the lives of the millions of people living in slums all over the world. By moving away from a charity/food-aid model, to a more hands-on self sufficient scheme, these people can have a better life with better living conditions. Countless examples of how slum women in other communities have achieved this include nurturing self-help groups, accessing housing subsidies and micro-credit financing, offering entrepreneurial development assistance and loans for small businesses, adult literacy and education programs, as well as health and nutrition.

As urbanisation increases, cities in the developing world will be faced with major development challenges of basic municipal services. Hopefully, city managers, planners and communities will be motivated to begin embracing innovative technologies, and plans, so that they can accommodate the increasing population, including the poor in slum areas. Women too should not be left out of the development debate given their

efforts in household care and provision. They should be included in the strategic planning of development projects, and as beneficiaries, their investment is of extensive importance. I hope to continue pursuing integrated planning approaches further in both developed and developing countries.

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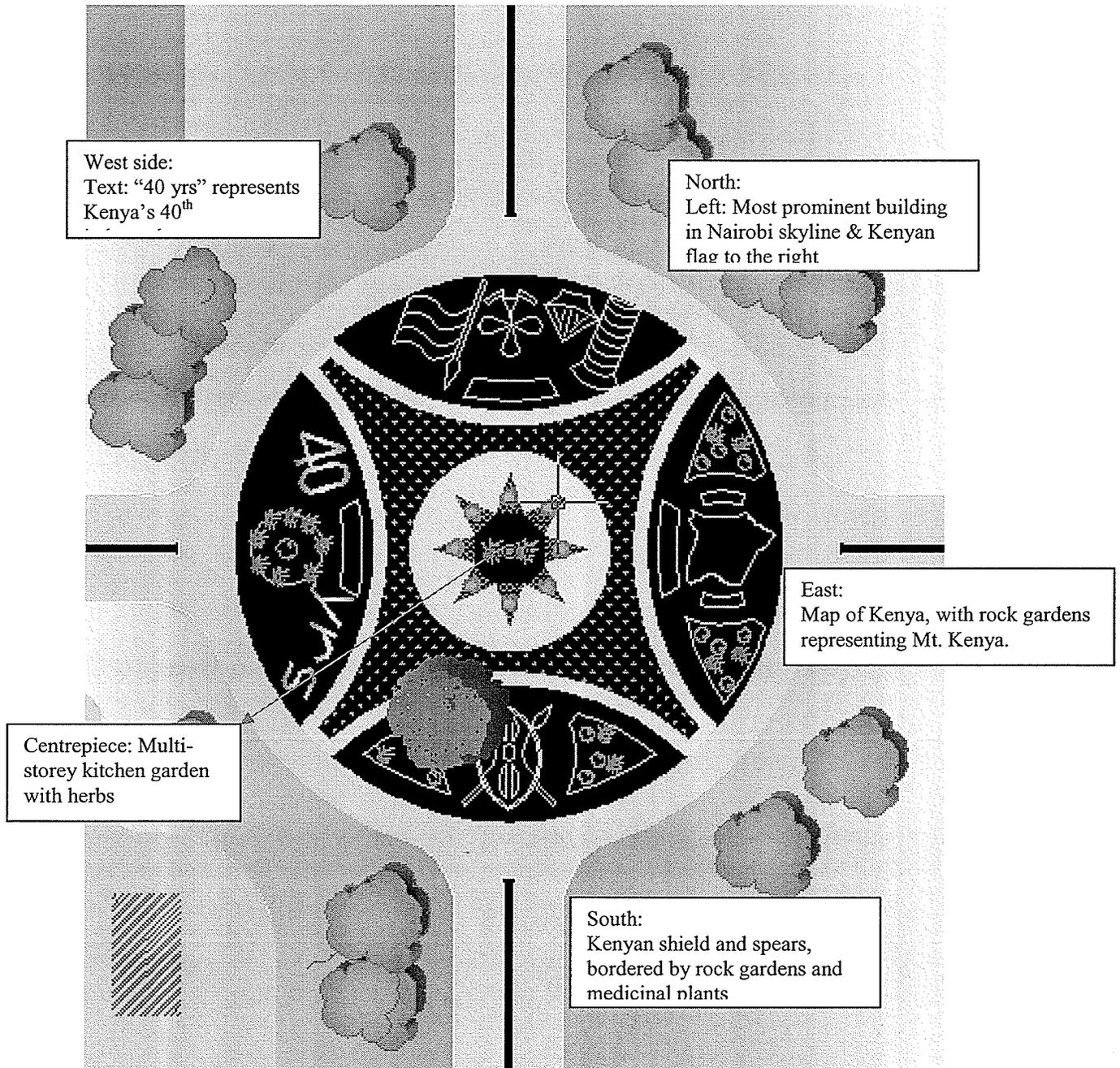
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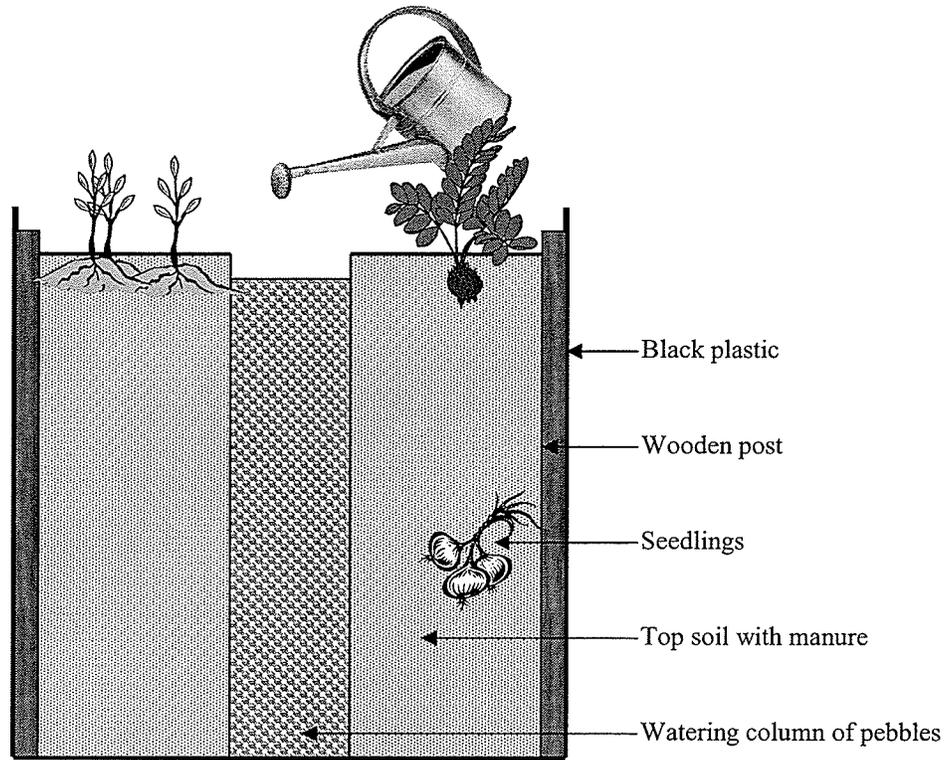
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9 APPENDICES

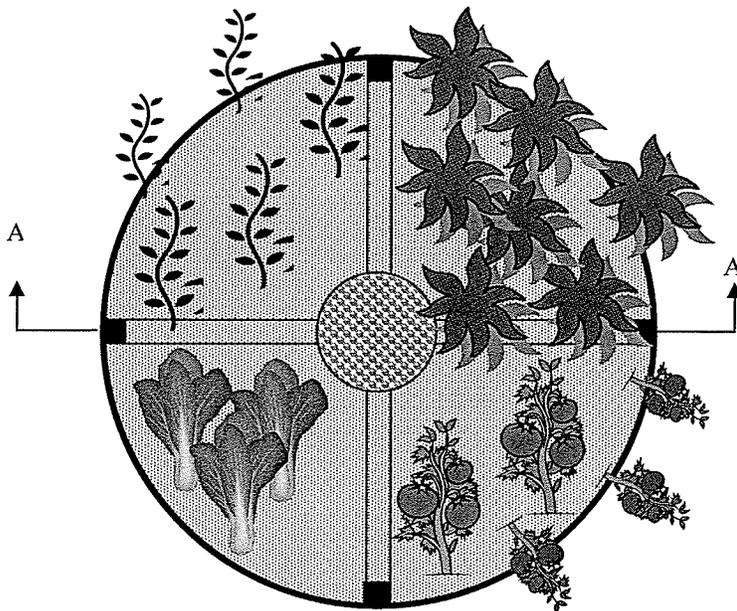


Drawing showing the overall design of the demonstration study at the Adam's Arcade Roundabout in Nairobi, Kenya.

Drawings of a multi-storey kitchen garden built at Adams Arcade Roundabout.



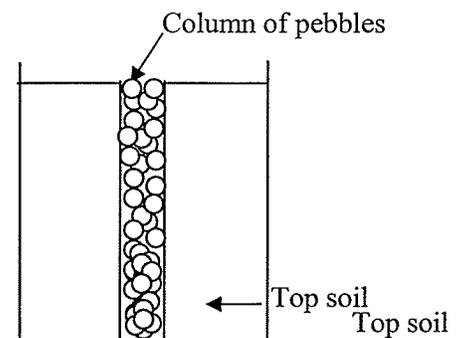
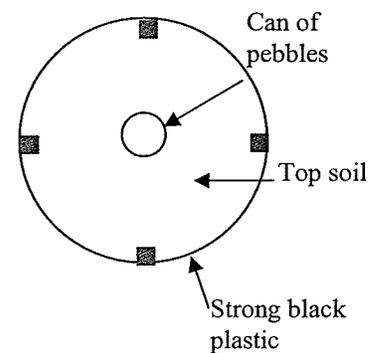
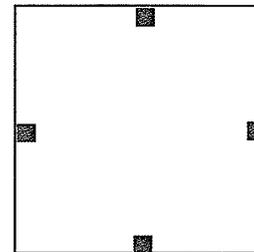
Section plan A-A



Plan view of a multi-storey kitchen garden

**TECHNICAL NOTES:
MAKING A MULTI-STOREY KITCHEN GARDEN**

1. Four wooden posts are laid on the ground in a 1.5 m square frame.
2. A strong black polythene paper is used to form a circle around the four poles.
3. A big can (~ 10 inches in diameter) is placed in the center. It is then filled with medium sized pebbles.
4. The surrounding area is filled with top soil and manure.
5. The can is lifted up and filled with more pebbles again. Surrounding area is filled with top soil.
6. Procedure is repeated until the soil comes to the top.
7. Holes are made on the black plastic.
8. Seedlings are planted through the holes.
9. Watering is done through the pebbles column.



ETHICS PROTOCOL SUBMISSION FORMS

Human Subject Research - Joint-Faculty Research Ethics Board x**Project Information:**Principal Researcher(s): LYNNE NJERI KARANJA

Status of Principal Researcher(s): please check

Faculty Post-Doc Student: Graduate Undergraduate Other
Specify: _____Campus address: City Planning Studio, Arch II Building Fax: 011-254-20-623080Email address: lnkaran@yahoo.com Quickest Means of contact: Via Fax or E-mailProject Title: REGREENING NAIROBI CITY: AN INTEGRAL APPROACH TO URBAN PLANNINGStart date: November 12, 2003 Planned period of research (if less than one year): 1 year

Type of research (Please check):

Faculty Research:Self-funded Sponsored
(Agency) _____**Administrative Research:**Central
Unit-based **Student Research:**Thesis Class Project
Course Number: _____

Signature of Principal Researcher: _____

This project is approved by department/thesis committee. The advisor has reviewed and approved the protocol.

Name of Thesis Advisor: _____ Signature _____
(Required if thesis research)Name of Course Instructor: _____ Signature _____
(Required if class project)

Persons signing assure responsibility that all procedures performed under the protocol will be conducted by individuals responsibly entitled to do so, and that any deviation from the protocol will be submitted to the Research Ethics Board for its approval prior to implementation. Signature of the thesis advisor/course instructor indicates that student researchers have been instructed on the principals of ethics policy, on the importance of adherence to the ethical conduct of the research according to the submitted protocol (and of the necessity to report any deviations from the protocol to their advisor/instructor).

Ethics Protocol Submission Form (Basic Questions about the Project)

The questions on this form are of a general nature, designed to collect pertinent information about potential problems of an ethical nature that could arise with the proposed research project. In addition to answering the questions below, the researcher is expected to append pages (and any other necessary documents) to a submission detailing the required information about the research protocol (see page 4).

1. Will the subjects in your study be **UNAWARE** that they are subjects? ___ Yes No

2. Will information about the subjects be obtained from sources other than the subjects themselves? ___ Yes No

3. Are you and/or members of your research team in a position of power vis-a-vis the subjects? If yes, clarify the position of power and how it will be addressed. ___ Yes No

4. Is any inducement or coercion used to obtain the subject's participation? ___ Yes No

5. Do subjects identify themselves by name directly, or by other means that allows you or anyone else to identify data with specific subjects? If yes, indicate how confidentiality will be maintained. What precautions are to be undertaken in storing data and in its eventual destruction/disposition. ___ Yes ___ No

Audio Recording & Confidentiality

Personal information, which may be revealed in informal discussions or audio-recorded interviews, will be kept confidential. Women's names, age, specific education levels or any other personal information will not be included in any publicly disseminated research materials (e.g. journal articles, reports).

(a) Photographs or Video Recordings

Photographs or video recordings may be taken of the women and the activities they engage in at the demonstration site or focus groups. They will not be wearing name tags that will allow them to be identified by name in the photographs. Photographs may be included in publicly disseminated research materials. Waivers will be signed by the womparticipants (including their children who might accompany them to the site) to allow photography or video footage, and for the use of photographs and video footage in publications and/or other publicly disseminated media arising from the research.

If the adult women desire final approval concerning which photographs are permitted for inclusion in publications or other publicly disseminated media, provisions will be made to allow for this.

There may be instances where an adult may wish to participate in the research, but does not wish his/her photograph or accompanying child, to be taken at any time. In this case, efforts

will be made to not include the adult or child when a photograph or video footage is being taken or. In cases where the adult or child has been accidentally photographed or filmed, these images(s) will be digitally altered by the researcher, to remove the adult and/or youth from the image, or the image will be immediately destroyed upon processing.

(i) Data Storage and Eventual Destruction

All data including original photographic negatives and photographs; video footage; audio recordings and transcripts; as well as research fieldnotes will be stored away in a private and secure office in Gigiri town. I will be working and have access to this office for the duration of the project. The audiotapes will be erased when transcripts have been made. These research materials will be stored until publications or other publicly disseminated media arising from the research have been published, at which time the research materials will be destroyed.

6. If subjects are identifiable by name, do you intend to recruit them for future studies? If yes, indicate why this is necessary and how you plan to recruit these subjects for future studies.

Yes No

After the first phase of the study, participants wishing to proceed to the second phase (demonstration study) will be given the opportunity to do so. At this point, a list of phase II participants will be assembled for further briefing on the site project.

7. Could dissemination of findings compromise confidentiality?

Yes No

As stated above, photographs may be taken of research participants and photographs or video footage may be included in publicly disseminated documents and/or other media with the participants' consent. When the research is publicly disseminated, name tags will not be worn by any female participant or other participants that would allow his/her identity to be disclosed. In addition, real names will not be attached to any persons in visual imagery, nor in the corresponding text within any final document (Pseudonyms may be employed). All participants will be made aware of these provisions. Waivers for photographing or documentary video footage will be signed by all female adult participants.

8. Does the study involve physical or emotional stress, or the subject's expectation thereof, such as might result from conditions in the study design?

Yes No

The study involves application of Urban Agricultural and Re-greening practices (gardening, landscaping, composting, and weeding), which will require some amount of physical stress. A reasonable workload (4-5 hrs per week) is anticipated. Provisions will be made to make the process as less stressful as possible. This is through raised garden beds and/or accompanying garden furniture for resting between sessions of working.

9. Is there any threat to the personal safety of subjects?

Yes No

10. Does the study involve subjects who are not legally or practically able to give their valid consent to participate (e.g., children, or persons with mental health problems and/or cognitive impairment)?
If yes, indicate how informed consent will be obtained from subjects and those authorized to speak for subjects. Yes No

It is likely that young children will accompany women participants. Those wishing to participate in the research will be required to seek permission from their parents/guardians. Parents/guardians will sign and submit an informed consent form allowing their child to participate in the study.

11. Is deception involved (i.e., will subjects be intentionally misled about the purpose of the study, their own performance, or other features of the study)? Yes No
12. Is there a possibility that abuse of children or persons in care might be discovered in the course of the study?
If yes, current laws require that certain offenses against children and persons in care be reported to legal authorities. Indicate the provisions that have been made for complying with the law. Yes No
13. Does the study include the use of personal health information? The Manitoba Personal Health Information Act (PHIA) outlines responsibilities of researchers to ensure safeguards that will protect personal health information. If yes, indicate provisions that will be made to comply with this Act (see document for guidance - <http://www.gov.mb.ca/health/phia/index.html>). Yes No

Provide additional details pertaining to any of the questions above for which you responded "yes."
Attach additional pages, if necessary.

In my judgment this project involves: minimal risk
 more than minimal risk

(Policy #1406 defines "minimal risk" as follows: "... that the risks of harm anticipated in the proposed research are not greater nor more likely, considering probability and magnitude, than those ordinarily encountered in life, including those encountered during the performance of routine physical or psychological examinations or tests.")

____ / ____ / ____
dd mm yr

Signature of Principal Researcher

Ethics Protocol Submission Form
Required Information about the Research Protocol

Each application for ethics approval should include the following information and be presented in the following order, using these headings:

1. **Summary of Project:** Attach a detailed but concise (one typed page) outline of the **purpose** and **methodology** of the study describing **precisely** the procedures in which subjects will be asked to participate.
2. **Research Instruments:** Attach copies of **all** materials (e.g., questionnaires, tests, interview schedules, etc.) to be given to subjects and/or third parties.
3. **Study Subjects:** Describe the number of subjects, and how they will be recruited for this study. Are there any special characteristics of the subjects that make them especially vulnerable or require extra measures?
4. **Informed Consent:** Will consent **in writing** be obtained? If so, attach a copy of the consent form. (see guidelines on informed consent). If written consent is not to be obtained, indicate why not and the manner by which subjects' consent (verbally) or assent to participate in the study will be obtained. How will the nature of the study and subjects' participation in the study be explained to them **before** they agree to participate. How will consent be obtained from guardians of subjects from vulnerable populations? If confidential records will be consulted, indicate the nature of the records, and how subjects' consent is to be obtained. If it is essential to the research, indicate why subjects are not to be made aware of their records being consulted.
5. **Deception:** Deception refers to the deliberate withholding of essential information or the provision of deliberately misleading information about the research or its purposes. If the research involves deception, the researcher must provide detailed information on the extent and nature of deception and why the research could not be conducted without it. This description must be sufficient to justify a waiver of informed consent.
6. **Feedback/Debriefing:** Describe the feedback that will be given to subjects about the research after they have completed their participation. How will the feedback be provided and by whom? If feedback will not be given, please explain why feedback is not planned. If deception is employed, debriefing is mandatory. Describe in detail the nature of the post-deception feedback, and when and how it will be given.
7. **Risks and Benefits:** Is there any risk to the subjects, or to a third party? If yes, provide a description of the risks and the counterbalancing benefits of the proposed study. Indicate the precautions taken by the researcher under these circumstances.
8. **Anonymity and Confidentiality:** Describe the procedures for preserving anonymity and confidentiality. If confidentiality is not an issue in this research, please explain why. Will confidential records be consulted? If yes, indicate what precautions will be taken to ensure subjects' confidentiality. How will the data be stored to ensure confidentiality? When will the data be destroyed?
9. **Compensation:** Will subjects be compensated for their participation? Compensation may reasonably provide subjects with assistance to defray the costs associated with study participation.

Ethics Protocol Submission Form
Required Information about the Research Protocol

Each application for ethics approval should include the following information and be presented in the following order, using these headings:

1. Summary of Project:

Purpose:

The purpose of this study is to apply Urban Agriculture and Urban Planning practices within the City of Nairobi, Kenya. The study will examine women's contributions to urban agriculture/re-greening in the urban planning of Nairobi. It is expected that the women involved in the Pilot Study will, with City approval, re-green an unused open public space such as a street, boulevard or roundabout.

The objectives are:

- To intensively cultivate and re-green portions of city streets with horticulture and/or food produce.
- To train urban poor in sustainable practices for improving the city environment.

Methodology:

Phase I: Semi-structured Interviews

Interviews with urban women from existing women's group from a Nairobi slum or squatter settlement. From these informal interviews subjects will be asked to give information about their:

- a) History and background of working or living on the streets.
- b) Views on Nairobi as a living environment: What could be done differently? How can they contribute?
- b) Commitment to their participation in Phase II: demonstration aspect of this study.

Interviews and/or Questionnaires for planning professionals will focus on:

- a) collecting information about the urban challenges facing downtown Nairobi
- b) identifying an effective and comprehensive planning program that includes urban agriculture
- c) gathering comments and views on the demonstration site after completion.

Interim Preparation:

- a) Submit a proposal to the City Town Clerk for approval.
- b) Gather resources for implementing the project (site, seeds, tools)

Phase II: Pilot Study

Participants proceeding to Phase II, will be required to do the following:

- a) Be trained by extension workers on sustainable practices suitable for selected sites.
- b) Re-green pre-selected sites in downtown Nairobi with City Council approval
- c) Document their contribution and attitudes as the project develops (by video or photographs)

Post-Evaluation interviews with both participants and professionals after Phase II:

- a) What were some lessons learnt from this process?
- b) Were the objectives attained from the project?
- c) How could the project be sustained in a longer term?

2. Research Instruments: Please see 'Research Instruments' on Page 9).

3. Study Subjects:

The research participants have the following characteristics:

- Low-income urban women who may include street hawkers, panhandlers, or squatters from slums.
- Have dependants/children in the early years (0 to 5 years)
- Without formal land ownership to personal land

Phase I: N= 50 (40 street participants and 10 professionals)

The female street subjects will be randomly selected from existing women's group from a Nairobi slum or squatter settlement in the city, while the professionals will be either City officials, or those involved in urban development projects, or downtown initiatives in the city.

Phase II: N= 10

These women will be those involved in re-greening an approved site in the Central Business District or urban area in the city of Nairobi, subject to City approvals.

No persons mentioned above are anticipated to have any special characteristics that make them especially vulnerable or require extra measures.

4. Informed Consent: (See consent forms from Page 14-19)

Participation is entirely voluntary and participants are free to withdraw from the study at any time, and/or refrain from answering any questions without prejudice or consequence.

Due to discrepancies in literacy levels, participants will have an option to either give their consent in writing or verbally. The latter, there will be a voice recording and mutual agreement between myself and the participants (see a copy of the consent form).

Before the study, I will brief participants as to the projects' intentions and objectives. I will then present to them some of the problems that have been identified, and some possible solutions that I am exploring. Their participation in the process will be a crucial aspect that will be emphasized before proceeding.

5. Deception:

No information will be deliberately withheld from participants and there will be no misleading information about the research or its purpose. There is no deception involved in this study.

6. Feedback/Debriefing:

There will be a post-evaluation debriefing in form of a focus group. This will be an opportunity to explain results, discuss recommendations and lessons learnt.

7. Risks and Benefits:

There may be some physical stress on the participants for labor on the pilot site. However, it is not anticipated that there will be any safety risk. Financial incentives will be given to each participant.

8. Anonymity and Confidentiality:

In order to preserving anonymity and confidentiality, pseudonyms will be used when referring to particular subjects. In the case of photographic or video documentation, consent will be sought from the participants before the study. Any information stored by audio-cassette will be destroyed after the data has been analyzed.

Audio Recordings

Personal information, which may be revealed during informal interactions, interviews, or other sessions (e.g., workshops), will be kept confidential. Participants' names, age, specific level of schooling (grade) or any other personal information will not be included in publicly disseminated research materials. Similarly, adult participants' names or any other confidential information will not be included in such materials. (Pseudonyms may be assigned.)

Photographs and Video Footage

Photographs will only be included in the final published document with the members' and parents/guardians' consent. When the document is published, it is of course possible for other people to recognize a person by face in a photograph or video footage. However, name tags will not be worn by any young person that will allow his/her identity to be disclosed by name. In addition, names will not be attached to any persons in photographs, nor in the corresponding text within publications arising from the research and/or other publicly disseminated media. All parents/guardians of the young people will be aware of the latter. Waivers allowing photography and/or video footage to be taken will be signed by all young people, parents/guardians of the youth participants or other adults involved in the study.

Data Storage & Eventual Disposition

All research data (e.g., photographs, video footage, audio recordings, transcripts, research field notes) will be stored in a private and secure office from where I will be working. The research materials will be destroyed, after publications and/or other publicly disseminated media arising from the research been published.

9. Compensation:

Persons participating in Phase I of the study and proceeding to Phase II of the study will receive an honorarium of \$6.00/week (Ksh. 300) for a maximum of 12 weeks spent working on the site.

RESEARCH INSTRUMENTS

{Please note that all research instruments will be available in both English and Kiswahili}.

Semi-Structured Interview Protocol for Urban Women from city slums**Background:**

- a) Do you have any children? Yes No
 If yes, please indicate their number and ages?
 0-2 years
 3-4 years
 5-6 years
 7-9years
 10 and above
- b) What are your other sources of income?
 Husband's income
 Other small business
 Savings
- c) Which residential area of Nairobi do you live?

- d) By what means do you come travel to the city center?
 Bus
 Minibus (Matatu)
 Walking
 Other
- e) What is your educational background?
 Never been to school (Please give reason below)
 Primary School
 Secondary School
 Community College
 University

Why were you not able to attend school?

Environment:

- f) How would you describe your working environment?

For those involved in Urban Agriculture practices

- g) Are you involved in any form of urban agriculture?
 Yes [proceed to (h)] No [proceed to (i)]
- h) If yes, where do you grow your crops?
 In my home back yard by a roadside
 by a riverside in the rural area
- i) If yes, what kinds of crops do you grow:
 vegetables (please indicate) fruits
 staples (please indicate) others
- j) If no, from where do you get your daily food?
 Grocery store Other
 Retail Market
- k) Where do you get your sources of input? Eg. water, manure or fertilisers
- l) How often do you receive assistance from local extension workers?
- m) What are some of the risks or challenges of practising urban agriculture in the city?

For those involved in Hawking:

- h) How long have you been selling fruits and vegetables in Nairobi?
 0-2 years 7-9 years
 3-4 years 10 and above
 5-6 years
- i) What do you sell on the streets?

- j) Where do you get the produce?
 Personal Farm Other
 Retail Market
- k) What is your weekly income from hawking sales? 1\$=Ksh. 50
 Less than Ksh. 100 Ksh. 1000-5000
 Ksh. 200-500 Above Ksh. 5000
 Ksh. 500-1000
- l) What is your weekly expenditure on the following?
 Rent
 Food
 Transportation
 Children's education/upkeep
 Extended family
 Health
 Saving

INTERVIEW PROTOCOL FOR PARTICIPANTS IN PHASE 11- Pilot Study:

I am interested in starting a Pilot Study that will be comprised of those interviewed. The study will involve planting trees, shrubbery, flowers and if approved, specific fruit or vegetables. You will be trained by a team of extension workers, and will be provided with seeds/plantings and agricultural equipment. You will also receive a minimum wage of \$6.00/hour.

a) Are you interested in receiving training for practicing UA in the city?
 Yes
 No

b) Do you have previous farming experience?
 Yes, If so, where have you farmed? _____
 No

c) Are you involved in any women's micro-credit services i.e. 'Vyama'?
 Yes. If so, do your savings meet your needs?
 No

d) What kinds of local vegetables or crops would you like to see grown?

e) Identify three (3) open public spaces that could be used for the pilot study.

f) What is your preferred mode of transportation to the city?

INTERVIEW PROTOCOL PLANNING PROFESSIONALS AND RESOURCE PERSONS:

a) What is the primary reason for the City's dilapidated state?

- Governance
- Management
- Financial resources
- Capacity

b) Which are some methods of changing and improving the environment?

c) To what extent are you familiar with Urban Agriculture practices in Nairobi?

d) What are your opinions in on urban agriculture practices in Nairobi as a whole? Does it have a place in the development of downtown Nairobi?

FOCUS GROUP PROTOCOL FOR POST-EVALUATION ASSESSMENT

a) What was the most valuable experience in participating in this study?

b) How would you advise the City council on sustaining the project?

c) How did you spend income made from selling the site's produce or from the honorariums?

Consent Form: For All Research Participants
(All consent forms to be typed in University of Manitoba letterhead)

Research Project Title:

REGREENING NAIROBI: AN INTEGRAL APPROACH TO URBAN PLANNING

Researcher: NJERI LYNNE KARANJA Sponsor (if applicable): UNIVERSITY OF MANITOBA

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The purpose of this research to demonstrate how urban women can be trained in managing and re-greening certain parts of the city of Nairobi. Your participation will require learning from experts on cultivating unused open spaces. Any produce grown will be for the participant as you are allowed to keep the produce grown. In turn, you will in good faith participate in a de-briefing session to review the demonstration exercise once it is completed.

Information may be recorded by an audio or video-cassette. If you are uncomfortable with either of these media, please notify the researcher before the interview or documentation sessions begin. Any information given will be treated confidentially and will not be accessed by any other persons other than the principal researcher. All audio-cassettes will be destroyed. Aliases will be used when referring to subjects recorded in photographic or video imagery. Please read and sign "Audio-Visual Waiver Form" in addition to this consent form.

You will be compensated for your participation in the entire study by receiving a token of Ksh. 300 per week for the fieldwork on the chosen site.

Your signature or finger print, on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Njeri Lynne Karanja,
Supervisor: Rae Bridgman

The Joint Faculty Research Ethics Board has approved this research. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Participant's Signature _____

Date: _____

Researcher Signature _____

Date: _____

Verbal Consent Form: Suitable for Interviews

Lynne Njeri Karanja, a Graduate Student in the Department of City Planning, University of Manitoba as part of project facilitated by Maxwell Starkman Travel Scholarship is conducting this research. The project is entitled "Regreening Nairobi City: An Integral Approach to Urban Planning". The University of Manitoba's Joint-Faculty Research Ethics Board has approved this project.

The purpose of this research to demonstrate how urban women can be trained in managing and re-greening certain parts of the city of Nairobi. Your participation will require learning from experts on cultivating unused open spaces. This will involve gardening and landscaping a site with both horticultural and floral crops. Any produce grown will be for the participant as you are allowed to sell and keep the profits earned. In turn, you will in good faith participate in a de-briefing session to review the demonstration exercise once it is completed.

The interview will be audio-recorded so that analysing the material at a later date will be completed with greater ease and efficiency. If you have any questions or concerns during the session, feel free to ask immediately. If at any time during the interview session, you do not feel comfortable commenting on an issue or question, you are not obligated to do so, or if you would like to stop the interview at any time, you are welcome to do so without prejudice or consequence.

Personal information will be kept confidential. This means that your name, your age, and/or any other information that would give confidential information away will not be included in any publicly disseminated materials arising from the study. Where information occurs within a session transcript, that will be included in the final report, names and other personal information will be omitted, unless permission to include them has been explicitly granted.

Information from this interview may form part of future articles, books or other publicly disseminated media by the researcher. All research data (e.g., photographs, video footage, audio recordings, transcripts, research field notes) will be stored in a private and secure office from where I will be working. The research materials will be destroyed, after publications and/or other publicly disseminated media arising from the research been published.

If you have any concerns or complaints about this project, please feel free to contact me at via e-mail at _____ OR you may contact the University of Manitoba Human Ethics Secretariat at (204) 474-7122.

I, _____, give Lynne Njeri Karanja permission to use the information gathered during this interview session under the conditions stated above, for the purposes of researching the opportunities of regreening and improving a portion(s) of Nairobi city by integrating urban agriculture in the urban planning of our city.

Date: _____

Respondent's Signature: _____

Verbal Consent Form: Suitable for Parents/Guardians

Lynne Njeri Karanja, a Graduate Student in the Department of City Planning, University of Manitoba as part of project facilitated by Maxwell Starkman Travel Scholarship is conducting this research. The project is entitled "Regreening Nairobi City: An Integral Approach to Urban Planning". The University of Manitoba's Joint-Faculty Research Ethics Board has approved this project.

The purpose of this research to demonstrate how urban women can be trained in managing and re-greening certain parts of the city of Nairobi. Your participation will require learning from experts on cultivating unused open spaces. This will involve gardening and landscaping a site with both horticultural and floral crops. Any produce grown will be for the participant as you are allowed to sell and keep the profits earned. In turn, you will in good faith participate in a de-briefing session to review the demonstration exercise once it is completed.

You child may be interviewed and audio-recorded so that analysing the material at a later date will be completed with greater ease and efficiency. If you have any questions or concerns while your child is being interviewed, please feel free to ask for clarification immediately. If at any time during the interview session, you do not feel comfortable with your child commenting on an issue or question, the child is not obligated to do so. If you would like me to stop the interview at any time, you are welcome to do so without prejudice or consequence.

Personal information will be kept confidential. This means that your child's name, age, and/or any other information that would give confidential information away will not be included in any publicly disseminated materials arising from the study. Where information occurs within a session transcript, that will be included in the final report, children's names and other personal information will be omitted, unless permission to include them has been explicitly granted.

Information from this interview may form part of future articles, books or other publicly disseminated media by the researcher. All research data (e.g., photographs, video footage, audio recordings, transcripts, research field notes) will be stored in a private and secure office from where I will be working. The research materials will be destroyed, after publications and/or other publicly disseminated media arising from the research been published.

If you have any concerns or complaints about this project, please feel free to contact me at _____ or
via e-mail at _____ OR you may contact the University of Manitoba Human Ethics
Secretariat at (204) 474-7122.

I, _____, give Lynne Njeri Karanja permission to use the information gathered during my child's interview session under the conditions stated above, for the purposes of researching the opportunities of regreening and improving a portion(s) of Nairobi city by integrating urban agriculture in the urban planning of our city.

Date: _____

Parent/Guardian's Signature (required in advance): _____

**Informed Consent Form:
Suitable for Parents/Guardians in the Demonstration study**

Lynne Njeri Karanja, a Graduate Student in the Department of City Planning, University of Manitoba as part of project facilitated by Maxwell Starkman Travel Scholarship is conducting this research. The project is entitled "Regreening Nairobi City: An Integral Approach to Urban Planning". The University of Manitoba's Joint-Faculty Research Ethics Board has approved this project.

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The purpose of this research to demonstrate how urban women can be trained in managing and re-greening certain parts of the city of Nairobi. Your participation will require learning from experts on cultivating unused open spaces. This will involve gardening and landscaping a site with both horticultural and floral crops. Any produce grown will be for the participant as you are allowed to sell and keep the profits earned. In turn, you will in good faith participate in a de-briefing session to review the demonstration exercise once it is completed.

With your permission, your accompanying child may be observed. His/her name, age, education level, and any other personal information will not be included in the any publication and/or other publicly disseminated media arising from the study. Where information occurs within a session transcript, that will be included in the final report, names and other personal information will be omitted.

All research data (e.g., photographs, video footage, audio recordings, transcripts, and research fieldnotes) will be stored in a private and secure office from where I will be working. The research materials will be destroyed, after publications and/or other publicly disseminated media arising from the research been published.

Photography or Video-Taping

Photographs or video-footage of your children may be taken during community participatory events, workshops or other kinds of sessions to capture group dynamics, activities, and interactions between participants. With your permission, your child's photograph may be included in publications and/or other publicly disseminated media arising from the research, allowing readers (or viewers) to catch a glimpse of activities and group processes. Your child's face may feature in these visual images, but nametags will not be worn that will allow him or her to be identified by name in photographs or video footage. In addition, names will not be attached to your children in photos, nor in the corresponding text within any publicly disseminated materials, unless such permission to include their name has been explicitly granted.

This research may be disseminated in the form of articles or books, or other publicly disseminated media (e.g., report, educational video).

If you have any concerns or complaints about this project, please feel free to contact me at
or via e-mail at _____, OR you may contact the University of Manitoba Human
Ethics Secretariat at (204)474-7122.

I, _____, have decided to allow my child to participate in research being conducted by Lynne Njeri Karanja. My signature indicates that I have read the information above and have given permission for my child to participate in all the activities he/she wishes to participate in. My child's signature indicates that he/she understands that this research is part of a study researching the opportunities of regreening and improving a portion(s) of Nairobi city by integrating urban agriculture in the urban planning of our city. Participation is entirely voluntary and participants are free to withdraw from the study at any time, and/or refrain from answering any questions without prejudice or consequence.

Please fill out the following additional information:

I will participate in the study, but no photographs or videos may be taken of my child or me.

OR

Yes, photographs or videos can be taken of me and my child during activities, which may be published in future publicly disseminated materials.

and

I also wish to see my child's photographs or video that may be included in future publicly disseminated materials for my final approval. You may contact me directly for approval.

OR

My final approval as to which photographs or video clips of my child are permitted for inclusion in the final document is not necessary.

Signature _____ **Date** _____

Release and Consent Form
Pertaining to the Photographic and Video Components of the Research Project:
“Re-greening Nairobi City: An Integral Approach to Urban Planning”

In consideration of my appearance in publicly disseminated publications or other media arising from the above-mentioned Research Project, without further compensation from The Producer(s), I hereby grant full permission to The Producer(s) to use my appearance and/or voice in connection with the production of a motion picture film, television tape or video-recording, computer or network distributed computer file, or still photography in any manner for educational, informational and any other professional purpose.

I agree that my appearance in publicly disseminated publications or other media may be deleted at your sole discretion and editorial control is at the sole discretion of the producers. I further agree that you may use and license others to use the aforementioned in any and all media including, but not limited to cable and broadcast television, the Internet, in the exhibition, distribution, promotion, advertising, sale, publicizing of the Research Project, and at educational conferences.

I expressly release The Producers, its agents, employees, licensees, distributors and assigns from and against any and all claims of action arising out of production, distribution, broadcast or exhibition of the aforementioned publications or media. This consent and waiver will not be made the basis of a future claim of any kind against The Producer(s).

I have read and fully understand all of the terms of this release.

I choose to participate in the Research Project.

Name (please print): _____

Signature: _____

Date: _____

I am an adult parent (or guardian) of a minor who has signed this Release and Consent Form and I hereby agree that the said minor and I will be bound by all the provisions contained herein.

Name (please print): _____

Signature: _____

Date: _____

OR

I do NOT choose to participate in the Research Project.

Name (please print): _____

Signature: _____

Date: _____