

# University of Witwatersrand Johannesburg

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Faculty of Humanities  
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## **Urban food gardens and community development: A case study of the Siyakhana initiative, Johannesburg**

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(Development Studies)

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## **Declaration**

I hereby declare that this Research Report is my own, original, authentic and unaided work. It is being submitted for the Degree of Masters of Arts (Development Studies) at the University of Witwatersrand, Johannesburg, South Africa. It has not been submitted before for any other degree of examination at any other university

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Date

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This study has reminded me that nothing is achieved by romanticising poverty or the poor. That means understanding both the people and the marketplace in which they live, shop and survive.

## **Abstract**

Urban food gardens and community development: A case study of the Siyakhana initiative, Bezuidenhout Valley, Johannesburg.

The aim of this study is to explore the links which exist between community development and urban food gardens. South Africa has experienced a twenty five percent growth in the urban population from 2005-2010. It is further predicted that this will increase by a further thirty six percent to thirteen million inhabitants by 2015. The practice of urban agriculture is one of the strategies that can assist in addressing development challenges in an urban setting in South Africa and around the world. Urban agriculture has the potential to provide a survival strategy for the poor and thus contribute to poverty alleviation, employment, food security, social integration and skills transfer. This research explores the economic, social and ecological benefits of the activity, questioning the ways in which the Siyakhana food garden (and larger initiative) contributes to the Siyakhana community. For the purpose of the research the Siyakhana community refers to the Siyakhana group (eight women in the inner city of Johannesburg who run Early Childhood Development Centres (ECDCs)) and the gardeners who work in the food garden.

Data was collected by means of semi-structured interviews, in-depth questionnaires, participant observation and informal conversation, as well as primary and secondary sources. The data was collected for a twelve month period from June 2010 to June 2011. In total the food garden was visited thirty times during the field work and the ECDCs twelve to fifteen times each. Because of the initiatives potential in community development, the focus of the research gives in-depth insights into the Siyakhana group, their history with the initiative, details about their ECDCs and their expectations and their perceived benefits of being involved with the Siyakhana initiative.

The key findings of the study are that there are two primary ways in which the Siyakhana group benefit from being involved in the Siyakhana initiative. The benefits relate to the supplementary food which the Siyakhana group receive on a weekly basis and the practical

learning environment of the Siyakhana food garden. This research shows that through their connection with the Siyakhana initiative the Siyakhana group act as a conduit for inner city community development. The healthy and nutritious food from the food garden and the knowledge obtained from being involved with the initiative is shared with a range of stakeholders within the inner city. The Siyakhana food garden is a unique example of a community project which embraces the concepts of ecological health promotion in a multiplicity of ways – through the distribution of food, training, conscientisation and mobilisation. Finally the study shows that when exploring the links between urban food gardens and community development it is not a pre-requisite for the community to physically engage in the production activities of the garden for empowerment and skills transfer to take place.

**Keywords:** urban agriculture, food security, urban livelihood strategy, sustainable livelihoods approach, sustainability, survival urban agriculture, alternative theories of development, parallel economy, community development, participation, empowerment, Early Childhood Development Centres (ECDCs)

## List of Abbreviations

|             |  |
|-------------|--|
| AIDS        | Acquired Immune Deficiency Syndrome                          |
| APES        | School of Animal, Plant and Environmental Sciences           |
| CBD         | Central Business District                                    |
| CID         | City Improvement District                                    |
| COHOP       | Community Oral Health Outreach Programme                     |
| CUPS        | Community University Partnerships                            |
| ECDC        | Early Childhood Development Centre                           |
| EMS         | Emergency Management Services                                |
| FAO         | Food and Agriculture Organization                            |
| FBSA        | Food Bank South Africa                                       |
| GEAR        | Growth, Employment and Redistribution strategy               |
| GFSP        | Gross Domestic Product                                       |
| GJMC        | Greater Johannesburg Metropolitan Council                    |
| HBC         | Home Based Care  |
| HDI         | Human Development Index                                      |
| HETN        | Health Empowerment Through Nutrition                         |
| HIV         | Human Immunodeficiency Virus                                 |
| HPU         | University of Witwatersrand Health Promotion Unit            |
| IDP         | Integrated Development Plan                                  |
| IFSS        | Integrated Food Security Strategy                            |
| JAM         | Joint Aid Management   |
| MDG         | Millenium Development Goal                                   |
| NDA         | National Development Agency                                  |
| NDP         | National Development Plan                                    |
| NGDS        | National Growth and Development Strategy                     |
| NGO         | Non-Governmental Organisation                                |
| NOPI        | National Organic Produce Initiative                          |
| NPO         | Non-Profit Organisation                                      |
| P&DM        | Graduate School of Public and Development Management         |
| PLWHA       | People Living with HIV/AIDs                                  |
| PPE         | Personal Protective Equipment                                |
| RDP         | Reconstruction Development Programme                         |
| SADC        | Southern African Development Community                       |
| SAP         | Structural Adjustment Programme                              |
| SDI         | Social Development Initiative                                |
| SEED        | Schools Environmental Education and Development              |
| SIEHFS      | Siyakhana Initiative for Ecological Health and Food Security |
| SPH         | School of Public Health                                      |
| SSA         | Sub-Saharan Africa   |
| TEDx        | Technology Entertainment and Design                          |
| TB          | Tuberculosis   |
| UNDP        | United Nations Development Programme                         |
| UN- HABITAT | United Nations Human Settlements Programme                   |

|                 |  |
|-----------------|--|
| UNICEF          | United Nations Children's Fund                             |
| WBS             | Wits Business School                                       |
| WHC             | Wits Health Consortium (Pty) Ltd                           |
| WHO             | World Health Organization                                  |
| WITS            | University of Witwatersrand                                |
| Wits Enterprise | Wits Legal Office and Wits Commercial Enterprise (Pty) Ltd |
| WSSD            | World Summit on Sustainable Development                    |

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## Chapter 1: Introduction

Over the past three decades world food production has grown faster than population growth (Drimie et al., 2003: 7). Yet still many people go hungry despite the massive growth in food production. The problem is not the amount of food that is produced but rather it is the fact that world food is not evenly distributed or consumed. According to several reports undertaken by WFP/FAO missions in the Southern African Development Community (SADC) region, in 2002 fourteen million people were living on the brink of starvation and faced serious food shortages until the next main harvest in 2003 (Drimie et al., 2003: 9). The picture which emerges is that despite international commitments towards reducing food insecurity and the real achievements in increasing global food security, there is a major gap in Southern Africa between the aspiration of eradicating hunger and the reality on the ground.

The problems of food insecurity are further aggravated by rapid urban growth in the region – every year fourteen million people join the urban population in sub-Saharan Africa. Of these people that are joining the urban population approximately seventy percent go to live in informal settlements or slum conditions (UN-HABITAT, 2010). According to the 2005 “Revision of the World Urbanization Prospects” (UN, 2006), by 2030, more than fifty percent of the African population is expected to live in cities (De Bon et al., 2010: 22). A similar trend is seen within South Africa where expectations are showing that by 2015 the urban population in the city of Johannesburg will grow to fourteen million inhabitants. With this growth it will put Johannesburg in the top fifteen urban cities in the world (Bengnwi, 2009: 6)<sup>1</sup>. As it stands in absolute terms, the majority of the urban poor are to be found in South Africa’s metropolitan areas (Rogerson, 2001). Urban development strategies that aim to eradicate poverty will only be successful if these strategies include ecological sustainability criteria relating to sanitation, solid waste removal, energy, building materials and food

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<sup>1</sup> Bengnwi, 2009 explores the practice of urban agro-ecology in terms of its benefits, constraints and possible solution to the challenges facing urban livelihood in the city of Johannesburg. The Siyakhana food garden was used as a case study to demonstrate how urban agro-ecology could be used as a tool to mitigate the livelihood challenges of poverty, unemployment and disease faced by the Johannesburg metropolis (Bengnwi, 2009: 6).

security (Swilling et al., 2006: 315). In these metropolitan areas the urban poor have limited access to municipal services. This is aggravated by the fact that design and service standards are unaffordable or not planned to allow for incremental planning, as poor communities improve and expand their willingness to pay for services. The situation which emerges is a bleak one and a major emerging development concern – the majority of the urban poor that inhabit metropolitan areas are suffering from problems of food availability and urban food security (Rudolph et al., 2008: 8).

The advance of urbanisation in South Africa demands the need for innovative and alternative solutions to the challenges facing major cities – urban food gardens are one such possibility (Rogerson, 2003: 137). Urban agriculture, which is widely practiced across the globe, has also accompanied the growth of most cities globally. Nearly a third of urban families (eight hundred million people) are involved in urban agriculture worldwide (Smit et al., 1996). Of these, two hundred million produce for the market and one hundred and fifty million are full-time food producers (Smit et al., 1996). Recently (over the past thirty years) there has been an upsurge of public interest in permaculture and more specifically urban agriculture and urban food gardens (Sullivan, 2008: 10). The opportunities which urban agriculture can offer in addressing development challenges have been well documented in Africa and around the world (Tambwe, 2008; Hovorka, 2002; Slater, 2001; Drakakis-Smith 1991). These opportunities and pros of the activity include the potential to provide a survival strategy for the poor and thus contribute to poverty alleviation, employment, food security, a social integration tool for disadvantaged groups within the community, skills transfer and capacity development.

In the literature on urban agriculture and development the majority of the research is dominated by a focus on the garden and production activities and the direct benefits transferred to beneficiaries from these activities. Within these activities there is furthermore an overemphasis on the economic value, with an under representation of the social and psychological benefits which urban food gardens can offer. Although substantial research has been done on the environmental effects, resource constraints, viability and

potential for urban cultivation in South Africa, this is largely based on the tenants described above. That is the assumption that production for the market is the primary and most important benefit of urban agriculture and its subsequent role in addressing poverty (Slater, 2001; Karaan, 2001; Rogerson, 1996a, 1996b; Webb, 1996, Rogerson, 1998; Webb, 1998; May et al., 1994).

This study differs from the literature on urban agriculture and builds upon the work of Slater (2001). It investigates urban agriculture in a manner which moves beyond the narrowly defined, economic paradigm and considers the social impact of urban food gardens and the downstream benefits which are accrued to communities involved with such initiatives (Slater, 2001: 638). It contributes in a new manner to the existing field of knowledge by providing an understanding of urban agriculture beyond the production activities. By exploring the links between urban food gardens, other institutions and community development it helps us to understand the conditions necessary for social, economic and environmental sustainability in similar projects and ventures of this nature (De Bon et al., 2010: 30). I look at urban food gardens as alternative food systems, and the ways in which these types of systems can serve the community and contribute to community development in a sustainable manner.

By investigating all the links connected to the urban food garden it is possible to create a more holistic picture of the value that urban agriculture can hold for development – this means not only the production of food but also its role in the community. This involves looking at the way in which food from the garden is distributed, shared and consumed by the Siyakhana community and the wider social benefits thereof. For the purpose of this study a narrow definition of “community” will be adopted. When referring to the benefits for the community I am speaking to those members who have some connection to the case study garden – the Siyakhana food garden, and who are involved in some manner with the initiative. Thus the Siyakhana community can be understood as all the beneficiaries and stakeholders involved with the project.

## **Objectives of the study**

1. To explore the links which exist between community development and urban food gardens;
2. To understand the diverse players, stakeholders and beneficiaries within the Siyakhana community and how they connect to an urban food garden and to one another;
3. To understand the collaboration which exists between the Siyakhana members around this urban food garden; and
4. To identify ways in which the urban food garden contributes to the Siyakhana community and where participants fit in and have influence.

In exploring the links present between community development and urban food gardens, a case study analysis of the Siyakhana Initiative for Ecological Health and Food Security (Siyakhana initiative), a division of the Wits Health Consortium (Pty) Ltd (WHC) (Siyakhana initiative) has been carried out. The Siyakhana initiative started in 2005 with the objective of creating an urban food garden which would supply fresh fruit and vegetables to Early Childhood Development Centres (ECDCs) and Home Based Care (HBC) organisations within the inner city of Johannesburg, South Africa. These organisations together form what is known today as the Siyakhana group. Since the beginning of the project the garden has not focused on market gardening and production for the market, but rather on meeting the needs of the surrounding community in the form of the Siyakhana group. Six years later this particular urban food garden and specifically its relationship to the community, albeit in difficult conditions, is a demonstration of the long term potential of the activity of urban agriculture towards development. To date whilst half of the initial ECDCs and HBC organisations have dropped out of the project the remaining ECDCs of the Siyakhana group demonstrate perseverance and commitment to the project. The Siyakhana initiative, whilst fraught with conflicts and difficulties of ownership and co-ordination (characteristic of all development projects), is a unique example of community benefits and links to the creation



of community development that can be established in conjunction with food gardens (Wills et al., 2009: 7).

In order to establish the links to the Siyakhana community, the research begins with an exploration of who is the Siyakhana group (as the primary beneficiary of the project) and what the day to day lives of its members entail. The Siyakhana group is a highly skilled group of vastly experienced women who manage and run ECDCs in the inner city of Johannesburg. The ECDCs are contextualised within the development challenges of food insecurity and poverty which sadly continue to dominate the inner city of Johannesburg. The discussion then proceeds with an analysis of the relationship which exists between the Siyakhana group and the initiative. Past issues of communication, issues of transparency and accountability are investigated. The fieldwork however demonstrates that despite these challenges – the initiative is working extremely hard to ensure that the community (the Siyakhana group) remain at the centre of the project. One of the most important findings of this study is the manner in which the Siyakhana initiative has responded to challenges of the project. Huge amounts of time, energy and effort have been put into making sure that the project is constantly adapting to meet the needs of the beneficiaries. Valuable lessons have been learnt – and these lessons have been used to inform and guide the next steps of the initiative. Thus whilst there is no blue-print which can be adapted for successful development projects, the Siyakhana initiative is a successful example of how change can take place to enable community development. Although the community/project model has not yet been mastered and there is still a lot of work to be done, there are many signs which demonstrate that the initiative is moving in a positive direction.

Finally the two major benefits which the food garden offers to the beneficiaries are explored in greater detail. These benefits are the supplementary fresh fruit and vegetables which are distributed to the Siyakhana group and the enabling environment which the Siyakhana food garden provides for the group. In terms of the food which is shared and distributed from the Siyakhana food garden, the major finding is that the garden helps a lot more people than simply the Siyakhana group. The children who attend their ECDCs and their parents all

share and benefit from the food distributed from the Siyakhana food garden. One can see cross-cutting benefits across all segments of the community from the links established by the Siyakhana group with the food garden. Thus the Siyakhana group acts as the conduit through which the benefits of the food garden are shared with the community. The research shows how the reach of the Siyakhana urban food garden extends far beyond that of just the production activities of the garden. Training, conscientisation and mobilisation are key ways in which the wider community have been linked to the urban food garden. Finally the study shows that engaging in the production activities linked to an urban food garden is not a pre-requisite for community growth and development to take place.

### **Macro and micro context of Urban Agriculture in Johannesburg, South Africa**

To understand the situation relating to food security in Johannesburg one needs to situate urban agriculture within and understand the influence of the process of urban policy and urban planning (Pillay, 2008: 109). South Africa (including SADC) has experienced a rapid scale of demographic growth and urbanisation over the past three decades. South Africa has experienced a twenty five percent growth in the urban population from 2005-2010. It is further predicted that this will increase by a further thirty six percent to thirteen million inhabitants by 2015 (Stats SA, 2010: 4; Rudolph et al., 2008: 7; Stats SA, 2005:20). Such numbers suggest that the associated development challenges will intensify over the coming decades. With these increasing challenges it is pertinent to understand the current state of food security in Gauteng and how urban agriculture, food gardens and sustainable development can present an avenue to address some aspects of the wider development challenges with which we are faced. One cannot separate the development challenges from the urban form as socio-economic determinants of health, including food security, are all entrenched in it.

Gauteng province is one of the major African centres, classified as the fourth largest economy on the continent and accounting for between thirty three to forty percent of South Africa's GDP (Bengnwi, 2009: 13; Rudolph et al., 2008: 7). Johannesburg is the economic hub and largest metropolitan area of South Africa situated in the smallest

province (geographically), Gauteng. Despite its economic strength, inequality remains a major problem, with the city of Johannesburg having a Human Development Index (HDI) of approximately 0.7. The apartheid regime created an unequal and inefficient system of municipal government, leaving behind a huge backlog in basic services and infrastructure provision in poor areas (Bengnwi, 2009: 22). Furthermore it has resulted in pockets of isolated rich communities that can survive within enclosed local economies needing nothing from the poor other than their labour, but the poor continue to be marginalised and excluded from these spheres of society (Swilling et al., 2006: 329). It is still evident that the particular configuration of poverty in South Africa is a fairly straightforward outcome of colonial and apartheid engineering (Aliber, 2002: 2). Half the households in Johannesburg are earning below the national minimum of R1 600 per month (Bengnwi, 2009: 22). Furthermore coupled with this poverty, there is a significant lack of access to food in Johannesburg (Metroaginnoversity, 2009: 2). This illustrates the manner in which the historical inequalities are reflected within our city with extreme poverty existing alongside extreme wealth (Southern Africa Food Lab, 2011: 1). It is evident that the present character of the city has been largely shaped by its colonial and apartheid past. It is still composed of highly contradictory conceptions of the articulation between various identities within a single political space, ethnicity and nation, indigenes and immigrants (Mbembe, 2001: 76).

South Africa has seen a multiplicity of national policy imperatives and targets for reducing urban poverty and food insecurity and increasing equity within the urban environment. These strategies and programmes include national economic and development policy frameworks (Reconstruction and Development Programme (RDP)) (1994) (which identified food security as a basic human need and a critical policy objective), the National Growth and Development Strategy (NGDS) and the Growth, Employment and Redistribution strategy (GEAR) (Aliber, 2002: 12). Also seen was a renewed focus on anti-poverty strategies such as the Poverty Alleviation Fund and the general move towards developmental welfare) (Aliber, 2002: 12). Public works programmes aimed at promoting environmental conservation and job creation (Working for Water and LandCare Programme) (Aliber, 2002: 12). Major infrastructure programmes with a focus on the national housing programme. And finally

second generation and integration strategies such as Urban Renewal Programme, Social Development Initiative (SDI), The Urban Development Strategy and The Urban Development Framework (Parnell, 2004: 2).

The National Development Plan (NDP), “Mzansi 2030” has come under criticism that it cannot lead to a future of no poverty, significant reductions in inequality or a society that has a 94% employment rate by 2030. It is argued that by simply acknowledging but not transforming existing power relations, the NDP provides no “game-changers” failing to imagine what it might be (Hassen, 2011). The Greater Johannesburg Metropolitan Council (GJMC) urban development strategy is in line with the NDP advocating for economic growth and job creation to address poverty and the development challenges with which the city of Johannesburg is faced (Beall et al., 2000: 393). Given the overall economic climate of South Africa and more specifically Johannesburg with the increasing levels of unemployment, job creation is a logical conclusion. However this will not be achieved if policy makers adopt a narrow, economistic framework for growth. Rather there is the need to make use of an alternative livelihood based conception which addresses the social relations of the poor as part of the solution to the problem of unemployment with which we are faced (Beall et al., 2000: 393).

In addition to the policy imperatives and targets aimed at the reduction of poverty, there is a fairly well established system of domestic “food aid” in South Africa (Greenberg, 2006: 14). The primary components of this are a school feeding scheme and a food parcel programme. The National Department of Health has an integrated nutrition programme that provides protein-enriched food to malnourished patients at government clinics and they also sponsored the primary school nutrition programme until this programme’s transfer to the Department of Education (Greenberg, 2006: 14). However over the past few years the spending on these programmes has been substantially reduced, particularly in Gauteng where in 2005 there was a drop from R74m to R10m (Gauteng Department of Health, 2006: 133). In 2005-2006 the Gauteng Department of Education’s school nutrition

programme delivered to four hundred thousand learners in one thousand one hundred and thirty three schools (Gauteng Department of Education, 2006: 165).

However despite these figures, the findings of this research highlight the fact that there are a large number of barriers to being chosen and included in the National School Nutrition Programme. To qualify for this programme is not simply just about being in a poor area within the inner city. The role of ECDCs in society is crucial as they provide learning during the critical stages from birth to five years of age. It is at these critical stages that teaching and the environment has a lasting impact on children's health, future learning and life success. Particularly within South Africa, the ECDCs of the Siyakhana group play an important role in putting young (and often under resourced) children first by ensuring quality care and education. Despite the Department of Education's mandate of creating a comprehensive approach to policies and programmes for children from birth to nine years of age, the picture of ECDC provision in South Africa remains a picture of inequality of provision and opportunity (Gauteng Department of Education White Paper 5 on Early Education, 2001: 12). The entire Siyakhana group emphasised the huge demand that exists for ECDCs within the inner city, explaining that there are many children who are not enrolled in ECDCs who desperately need the education and oversight during the day when their parents are at work.

In terms of food security, the South African government have pledged to support to the Rome Declaration to halve the number of undernourished people by 2015 (Dawson, 2008: 18). To achieve this, a food security working group "The Integrated Food Security Strategy" (IFSS) was appointed to achieve the objectives as per the Rome Declaration (Dawson, 2008: 18). While the state has a constitutional mandate (Constitution of the Republic of South Africa, Chapter 2, section 27.1b) to ensure that all citizens are food secure, it is only through a broad, participatory approach that engages all levels of society proactively, that the ecological, social and financial resources to implement these recommendations can be mobilised (Rudolph et al., 2008: 36).

In 2002 attempts were made to consolidate and integrate a multiplicity of diverse food security programmes, to create a multi-partnered national food security strategy (Dawson, 2008: 18). This in part was fuelled by the acute food shortages in Southern Africa during 2000 and also in part from the United Nations World Summit on Sustainable Development (WSSD) which brought together global leaders from government, civil society, and business to review the implementation of Agenda 21 (Drimie et al., 2003: 1). It has been widely recognised that there has been limited success since the Rio Conference in integrating social, economic, and environmental pillars of sustainable development and in creating a coherent and integrated global-local governance to underpin them (Drimie et al., 2003: 2). The South African government's response to these challenges was the development of twenty-two priority areas for international negotiation, of which food security was one of the six core areas that required attention at the WSSD. However, the formulation and implementation of these policies over the past three decades has been largely haphazard, with policy surrounding urban agriculture being very theoretical and poorly integrated (Pillay, 2008: 112).

As compared to other parts of Africa, the incidence of urban agriculture in South African open spaces is much less (Lynch et al., 2001). When discussing market and non-market contributions, urban food production in fact makes a very limited contribution to domestic food supply (Greenberg, 2006: 12). According to Greenberg (2006) (although there is a gap in the literature in the quantification of urban food production), the poorly supported and under-resourced character of urban agriculture means that it does not have a significant presence in the formal food market in South Africa (Greenberg, 2006: 12). Some studies in the early 90's in KwaZulu Natal found that twenty-five to thirty percent of households on the urban fringe were engaged in some cultivation (Rogerson, 1996a: 9). Whilst urban agriculture is a recognised tool for sustainable development in post-apartheid South Africa, it is still not acted upon in a systematic way.

With the importance of sustainability dominating the development agenda over the past few years, policy makers are slowly recognising the need for a multi-faceted approach for

dealing with food security, but at the same time creating more liveable, equitable and sustainable cities (Pillay, 2004: 11). The most recent attempt in addressing the need for creating sustainable cities is the Draft National Strategy on Sustainable Development and Action Plan 2010-2014. There are five major initiatives of this draft which include food security and urban agriculture, energy and water security, waste management and recycling, public and a non-motorised transport plan and peoples' markets (Gauteng Province Department of Economic Development, 2010: 2). Within these strategies the importance of food security is emphasised "food security: reducing food imports and (vastly) increasing local food production" (Gauteng Province Department of Economic Development, 2010: 6). This draft document is also supported by the "Joburg 2030" document, in which there is an emphasis on the commercialisation of urban agriculture for economic growth. Notably however the small scale nature and possibilities of the activity are not highlighted in this document (Parnell et al., 2006: 350).

Evidence from the Gauteng region demonstrates that there is definitely increased interest from multiple stakeholders within society (government and non-government) in the opportunities which urban agriculture can present. In Gauteng a number of government departments including the Department of Health, the Department of Social Development, the Department of Agriculture and Joburg City Parks have shown interest in urban agriculture and particularly the role that food gardens can play in curbing poverty, food insecurity and low calorie intake, especially amongst People Living with HIV/AIDS (PLWHA) (Bengnwi, 2009: 13). In addition to the interest which is being shown, there are various practical examples of commercial urban agriculture which is being practised in Gauteng. Within the programme and action list of the "Joburg 2030" document, poly tunnels are listed to provide high value added agro processing adjacent to Soweto (City of Johannesburg, 2002:141). There is also the vision for the development of commercial urban agriculture associated with the Lufhereng project (previously known as Doornkop Greenfields) (Thomaz, 2009). This is planned to be a 1 800 hectare project with envisioned agri-estates. While the guiding philosophy and guidelines adopted by government clearly present a comprehensive approach, there are not many examples of the successful

implementation of the commercial agriculture targeting strategy. The Lynedoch EcoVillage case study in Stellenbosch (Lynedoch EcoVillage is the first ecologically designed, socially mixed community in South Africa) also provides many learnings for urban policy and strategy (Swilling et al., 2006: 331). It teaches three important lessons that contradict widely held assumptions about urban development in South Africa. The first lesson is that ecologically designed urban systems and built forms can save households money and reduce the burden on overstressed municipal infrastructure (Swilling et al., 2006: 331). Secondly, it is possible to develop child-centred socially mixed communities. Thirdly if spatial integration of low-and high-income households takes place we can develop a much greater variety and quantity of more exclusionary markets (Swilling et al., 2006:331).

Thus whilst there is a definite interest in urban agriculture and sustainable approaches to urban planning, there is still a lack of policy and poor inclusion in urban planning, which limits the implementation and management of urban agriculture in the South African context (Windberg, 2001; Jarlov, 2001). Currently in South Africa there is a lack of inter-departmental integration with little effort to work in a cooperative and synergistic fashion towards addressing urban livelihood challenges through the implementation of urban agriculture (Bengnwi, 2009: 80). This is unfortunate as urban agriculture presents one way in which to address the extraordinary unequal relations of the South African city. It is an avenue which could be used for redistributive urban development through the way in which it creates a landscape, i.e. public good in which users cannot be excluded from (De Bon et al., 2010: 27).

From the trends observed in the Gauteng context whilst there are clearly efforts focused towards commercial urban agriculture activities there is a fragmented approach with minimal support and participation from a subsistence level. Only 3% of households in Johannesburg grow their own food. According to a study by Rudolph et al., 2008 in conjunction with the Programme on Urban Food Security<sup>2</sup> self-grown food in general played a very minor role (Rudolph et al., 2008: 27). The contribution of self-grown food was

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<sup>2</sup> This study considered households in Alexandra, Orange Farm and the inner city.



generally infrequent revealing the marginal importance of urban agriculture for day-to-day provisioning of food (Rudolph et al., 2008: 27). This is reiterated by the findings of this research which demonstrates that out of the eight ECDCs (which have strong links and knowledge of urban agriculture) only half of the group are participating in the activity themselves. Therefore whilst in policy and draft legislation the benefits of urban agriculture are being realised, in practice if urban agriculture is to contribute to economic growth, government investment in the activity and supporting infrastructure is required (be it commercial or small scale) (Rudolph et al., 2008: 34).

Taking into consideration the relatively low incidence of subsistence urban agriculture in Gauteng, the Siyakhana initiative provides an opportunity to identify with the theories of ecological health and sustainable development. One is able to understand the ways in which the learnings from this initiative can be transposed and shared with others in the urban environment. Through sharing the learnings of the Siyakhana initiative in the arena of urban agriculture and ecological health with the wider community, a diverse range of players in the food security system can connect and understand potentials for collaboration around common interests. The Siyakhana initiative has the ability to act as a platform for understanding and sharing of knowledge to assist the ventures of both individuals practicing urban agriculture at a subsistence level and commercially orientated urban agriculture. The lessons learnt from this local project coupled with learnings from other African countries such as Kenya and the DRC provide invaluable information for the future of urban agriculture. Furthermore the knowledge and experiences of the Siyakhana initiative can be used to assist provincial government in the development of an inter-sectoral policy framework, and the implementation guidelines for urban agriculture (Wits HPU, 2008: 5).

If South Africa is to become committed towards urban agriculture as a strategy for addressing both food security and redistributive urban development, attention needs to move from specific projects towards the wider and complete urban infrastructure. Without adequate access to land and water, basic infrastructure for production and local market access, training and capacity building and on-going support, the possibilities for the activity

at both the subsistence and commercial level are limited (Rudolph et al., 2008: 34). This requires greater co-ordination and capacity from the various levels of governments as well as from other role players such as the Non-Governmental and Community Based Organisations (Dawson, 2008: 16).

This chapter has provided an introduction to the research and has situated Johannesburg and Gauteng within the larger picture of South Africa, highlighting the rapid population growth and the associated increase of development challenges. The chapter has recognised the attempts which have been made in the past towards redistributive urban development; however it has highlighted the largely fragmented manner in which these attempts (particularly in terms of food security and urban agriculture) have been made. Current examples of urban agriculture taking place at both a commercial and subsistence level were explored to provide the reader with an understanding of what the situation is relating to food security in Johannesburg. It is against these practical examples (which in fact are very few compared with the patterns of urban agriculture in other African cities) that one realises the legacy of the apartheid city and how infrastructure is still a major constraint to the development of urban agriculture activities. Finally the chapter emphasises that for urban agriculture to play a pivotal role in addressing food security within the region, supportive policy within urban planning needs to accompany the implementation and management of such activities in the South African context.

The discussion has been facilitated to introduce the activities and objectives of the Siyakhana initiative. In the following chapter the Siyakhana initiative is used as a platform against which to stimulate thinking and the sharing of new and innovative ways to face the urban challenges with which Johannesburg is faced. Through understanding the objectives and vision of the Siyakhana initiative (to be a practical demonstration site) the multiple benefits of urban agriculture are explored. These include making productive use of land, engaging people in productive activities, demonstrating ecological practices in residential communities, providing food for food insecure people, and providing small scale livelihood opportunities.

## **Chapter 2: Literature Review**

This chapter discusses the literature associated with urban agriculture. There is a focus on the multi-functionality of the activity and more specifically the links which exist between urban agriculture, poverty alleviation, food security and community development. The chapter begins with tracing the origins of urban agriculture. In tracing these origins I look at the way in which the activity was promoted by the international development community during the 1980's, largely as a response to changing ideas on economic growth and development. The literature then goes on to explore the dominant functions of urban agriculture in Africa namely food production and income generation and the role these play in the development process. The discussion surrounding poverty looks specifically to the incidences of urban poverty. The dynamics of urban poverty are further investigated focusing on livelihoods and the manner in which capabilities affect our understanding of the concept and occurrence of urban poverty within our cities.

The review then expands on the mainstream functions of urban agriculture providing a critique, of the solely economic manner in which this activity is viewed. In response to this critique there is an exploration of the social aspects of urban agriculture. The critique highlights the importance (and former neglect in developing countries) of investigating the social benefits of urban agriculture. It investigates how the social conditions and aesthetic nature of a "green" space can create the environment and conditions for empowerment and an inclusive development process for communities that are connected to urban food gardens. Finally the review takes a look at literature which is opposed to urban agriculture and the reasons thereof, positioning it within and comparing it against larger development indicators and literature.

Over the past few decades there has been a clear trend in development literature, of a move from structural and economic centric growth and development models towards alternative, bottom up and pro-poor models. It is against this trend that a review of people-

centred development is provided. I contextualise and define the “buzz words” of alternative paradigms of development which are often so loosely thrown around in the development arena. The literature review recognises the extensive critique of these “buzz words” and their associated implications in development rhetoric. It engages with the literature as a way to guide the empirical findings and understand the connections between community development and the case study (Batliwala, 2007; Asthana, 1996; McArthur, 1995; Rowlands, 1995). As part of this engagement, definitions of the central concepts of this study are provided, namely community development, participation and empowerment. Whilst it is recognised that definitions vary with context and over time (meaning that “buzz words” and terms are rarely neutral), the literature review provides the framing of the use of these concepts within the case study. Intertwined with the clarification and analysis of “buzz words” and concepts is the way in which these are all related to one another and to larger notions of community development. The purpose of combining the “buzz words” clarification with the larger themes of development was to demonstrate a key characteristic of all of these terms, namely that community development, empowerment and participation are multi-faceted, complex and on-going processes that can only be understood once situated within a larger whole. It is only through the application of such logic (one of multi-functionality and complexity) that the true benefits of urban agriculture to community development are revealed in all spheres of development – economic, social and political. The literature further explores the links which exist between community development and urban agriculture looking at urban agriculture as a true bottom-up and people’s initiative. To take these connections one step further a discussion around food security and using it as a key indicator of community development takes place.

### **Urban Agriculture, Food Security and Poverty Alleviation**

Urban agriculture is by no means a new concept or invention; in fact it has been practiced in different forms in many different parts of the world for thousands of years (Bengnwi, 2009: 27). The earliest example of this type of cultivation traces back to the earliest known city, Catal Huyuk in Antolia (now Turkey) where rain cultivation and domesticated animals existed in around 7000 B.C. (Bengnwi, 2009: 27). However the formalisation of urban

agriculture as a field of enquiry across the developing world can be clearly identified with the 1980's (Madaleno, 2000: 73). This interest was largely spurred by the development crises of the sixties and the associated urbanisation and rural exodus, particularly within the African context. Accompanying this rapid urbanisation was the rise of capitalism and industrialisation which largely created the need for increasing development interventions but also increased livelihoods and survival measures by the poor.

From a top-down perspective, international development institutions promoted both community and home garden practices in developing countries worldwide (Madaleno, 2000: 73). The initiatives ranged from research to pragmatic programmes towards technical skills training and funding with support ranging from UNICEF, FAO, UNDP, the World Bank and the United Nations University (Madaleno, 2000: 73). On the other side of the coin, accompanying this formal support was a large extent and variety of bottom-up initiatives from the people. Urban cultivation has long been understood as a "micro-level or peoples initiative to cope with the economic crisis" while governments and development institutions tried to implement SAPs as a form of development intervention (Trefon, 2009; Mlozi, 1996). Against the implementation of SAPs of the sixties, rural communities (particularly women) increasingly experienced problems in sustaining their families on subsistence agriculture alone. The migration of people from rural to urban areas across Africa was one of the contributing factors towards population growth in urban areas (Tinsley, 2003: 296). Other factors which are presumed to be responsible for the unfolding of urban growth and urbanization processes include (but are not limited to): imbalances in the provision of social services, consequences of deficient economic policies, changes in land use policies, market liberalisation, conflict and natural disasters (Elhadary et al., 2011: 63). With the global food system coming under increasing strain this demographic and economic shift is forcing people to create innovative ways of surviving in urban areas, one of which is urban agriculture (Tinsley, 2003: 296).

From a policy point of view since the sixties interest in urban agriculture has continued to grow, with a clear trend of the activity occurring in parallel with studies of the informal

sector. Today urban agriculture in one form or another is practiced by an estimated eight hundred million people in all regions of the world in both industrialised and developing countries (Bengnwi, 2009: 70). For these people who are practicing urban agriculture it is largely seen as a livelihood's strategy and an alternative source of income for those who are unable to secure formal income opportunities (Rogerson, 1997). Despite these numbers however, the growth of the activity in Africa has been hampered since the 1980's. This is largely as a result of many urban economies being in a state of stagnation, if not steep decline, brought about by underlying structural problems in the macro economy, and by the economic reforms aimed at agriculture-led economic recovery. However despite the fact that Africa is trailing on nearly every Millenium Development Goal (MDG) indicator, there is a new wave of optimism spreading through Africa as economic growth rates are steadily climbing (Swilling, 2010: 1). Mark Swilling (2010) indicates that Africa's real Gross Domestic Product (GDP) has increased by five percent per year since 2000, more than twice what it was in the 1980s and 1990s (Swilling, 2010: 1). Despite these growth rates however, South Africa cannot escape the resource depletion challenges that face the rest of the world. It is not possible for real wealth accumulation per capita to keep climbing unless economic growth rates are decoupled from resource depletion rates.

In post-apartheid South Africa urban planners have had to confront and plan for a diversity of urban experiences and economic reforms for the first time. With the amalgamation of local government across previously stark divisions of social, economic and spatial exclusion, the possibilities of urban agriculture in South Africa have been slow to take off the ground (Parnell et al., 2006: 338). In Africa, between twenty to sixty per cent of residents in various cities are estimated to be engaged in food production (Bengnwi, 2009: 3). Compared with other African countries such as Botswana, Kenya (sixty seven percent of urban families are farmers), Zimbabwe (in two areas of Harare four fifths of households interviewed were involved in food production) and Zambia (about forty five per cent of six hundred and forty eight households interviewed in Lusaka were cultivating gardens in 1992-93) large scale implementation of urban agriculture in South Africa still remains small. Experience from the continent however can be applied to the South African context and provide ways and

examples for exploring sustainable food production within South Africa and more specifically Johannesburg (the site of this research).

Within the South African context we thus have to ask the question what does urban agriculture actually entail and what is the difference between large and small scale implementation? When talking about urban agriculture is it simply an individual who grows food in their back garden or does it relate to large scale commercially viable projects? The answer is both – there are many different definitions and examples of urban agriculture which have been developed ranging from initiatives for both planned and informal cultivation (Rogerson, 2003: 140). Of these multiple definitions each adopts its own different emphasis on the relationships between agriculture and the city, both in terms of resources and outputs (De Bon et al., 2010; Slater 2001). For the purpose of this study and based on the main incidence of the activity in South Africa “urban agriculture” is understood to mean agricultural and gardening activities (e.g. vegetable production, livestock rearing, aquaculture and flower and ornamental gardens) for food and other uses in both urban and peri-urban areas (Slater, 2001: 635). The urban food garden in this case study (Siyakhana urban food garden in Bezuidenhout Valley, Johannesburg) only engages in urban agriculture which produces fruit and vegetables. This is because the keeping of livestock is not permitted to take place under the City of Johannesburg Metropolitan Municipality, Public Open Spaces By-Laws (2004). Thus the Siyakhana urban food garden is an example of a planned small scale urban agriculture project and not a commercial urban agriculture venture.

This definition has been purposively used for the research design of the study, as the broad view of the activity enables me to perform an investigation of the multifaceted nature of the activity. In particular in tracing the links between urban food gardens and community development the social benefits of urban food cultivation are very important to this study. Through the use of a wide definition it gives me the ability to adopt a multifaceted approach to urban agriculture. This has helped me to explore the multi-functionality of the activity (economic, social, political and environmental) and to unravel benefits far more complex than simply the economic benefits of the activity (De Bon et al., 2010: 27). The Siyakhana

urban food garden is an example of a development initiative which extends far beyond the economic benefits of urban agriculture. Typically the economic benefits related to urban agriculture stated in the literature are enhanced food security, improved nutrition and income and employment. There are multiple examples of the social benefits which the garden provides to the Siyakhana community (Rogerson, 2003; Drescher, 2001; Sanyal, 1987; Wayburn, 1985). Whilst the primary objective for the establishment of the garden was based on the poor dietary needs of the inner city community, the garden is about a lot more than just the production of food (Slater, 2001: 642). In fact the garden does not yet even sell any of its produce for commercial gain. Income generation for this project and economic gain is thus not derived from the produce of the garden but rather the complementary activities which surround the larger initiative of food security and ecological health. These activities include training and research, networking, conscientisation and mobilisation which all in turn contribute towards improving availability and accessibility of nutritious food. In this manner the food garden acts as a hub, a demonstration site and practical “laboratory” for ecological food gardening, sustainable livelihoods and improved urban environments (SIEHFS, 2009: 1).

The description of the hub “model” and complementary nature of the supporting garden activities are used to further emphasise the way in which the activities are embedded in and interact with the urban ecosystem. The inter-connectivity demonstrated by the Siyakhana food garden highlights the approach of permaculture which is adopted and how it is related to the entity of ecological health promotion. Ecological health promotion is an approach led by the Wits Health Promotion Unit (HPU) which involves an inter- and multi-disciplinary network of experts from various fields who all explore the links between food security, environment, livelihoods and health (SIEHFS, 2009: 1). The basis of human inter-relatedness to ecological niches particularly in the urban environment brings into perspective the significance of agro-ecology (Bengnwi, 2009: 26). Permaculture, ecological health promotion and agro-ecology all share the same basic tenants, namely an interdisciplinary and systems thinking approach towards a long term sustainable notion of urban agriculture (Dawson, 2008; Holmgren, 2007; Crawford et al., 2005). The term “permaculture” comes from



“permanent agriculture” and refers to a sustainable way of doing agriculture. Permaculture involves a cultural and social orientation of the community and finds a way of sustaining and working with the actual ecosystem (for the Siyakhana food project – Johannesburg) we find ourselves in. Thus it involves finding a way to effectively utilise the available resources; human, physical and ecological environmental resources.

Permaculture principles are central to the garden design, land care and infrastructure development of the Siyakhana food garden (case study of this research). The garden infrastructure (which at this stage includes the field office and ablution facilities) is built from natural materials. The methods and materials employed are “ecologically friendly”, and include the use of timber, straw bales, soil, rock and onduline natural roofing sheets. Since no concrete slabs are used in the construction of infrastructure the bulk of all components can be re-used or will biodegrade harmlessly. This enables the existence of a consciously designed landscape which “mimics the patterns and relationships found in nature, while yielding an abundance of food, fibre and energy for provision of local needs” (Holmgren, 2007: 2). The approach adopted by the Siyakhana initiative is not simply a short term solution to food insecurity and community development but is a holistic activity which is intricately embedded and connected to the influence of location and human-environment relations on production systems (Holmgren, 2007; Hovorka, 2005).

The Siyakhana food garden is both a productive garden and demonstration site where the design and techniques of the garden can be shared with the community. The provision of fresh and healthy organic food to the Siyakhana community remains one of the most important benefits of the garden. Extensive studies have been performed on the effect of urban agriculture on food security in terms of the overall availability and supply of food for urban markets, and in terms of self-consumption (De Bon et al., 2010; Maxwell, 2002). Food security is one of the indicators which has been used to establish the links to community development. The literature thus contextualises food security as a development and poverty alleviation strategy and the extent thereof in both South Africa and across the continent.

According to Koc et al. (1999), food security means that “food is available at all times, that all persons have means of access to it; that it is nutritionally adequate in terms of quantity, quality and variety; and that it is acceptable within the given culture” (Koc et al., 1999: 1). Based on this definition there are three factors which are assumed for a state of food security: “the adequacy of available food, sufficient access to food, and equitable food distribution” (Wits HPU, 2008: 1). According to Mandla Tshabalala (garden manager) food security “is about the ability of households to feed themselves, to learn how to preserve and prepare foods so that their health-giving qualities are retained” (Afronline - The Voice of Africa, 2011). From this definition it is evident that there is a fourth and very important aspect of food security which is often overlooked in definitions. This is the fact that in addition to securing access to food; one also needs to know the correct methods of preparation to benefit from the full nutrition of the food. Thus for the purpose of this study a combination of the Koc et al. (1999) and Mandla Tshabalala (2011) definitions will be used.

The available data in Asia and Africa confirms the importance of urban agriculture in the provision of perishable food commodities, including fresh fruits and vegetables and dairy products (De Bon et al., 2010: 24). However a major problem is that despite these extensive studies on the importance of urban agriculture, actually very little is known about the extent of food security in the towns and cities of Southern Africa (Rudolph et al., 2008: 8). What we do know, however, is that Sub-Saharan Africa (SSA) is severely affected by the problem of food insecurity making it one of the most insecure regions on the continent. What makes the situation even worse is the fact that unlike other continents such as Asia or Latin America, SSA has failed to improve over the past few years. In 2016, it is estimated that more than half of the food intake in SSA will be below the nutritional requirement (Bauta et al., 2008: 4). Against these statistics, it is not surprising that the majority of research from around the world illustrates urban agriculture overwhelmingly as a survival strategy adopted by the poor to reduce their vulnerability in urban areas (Bauta et al., 2008; Hovorka, 2005; Rogerson, 2003; Maxwell, 2002; De Zeeuw et al., 2002; Deelstra et al., 2000; Rogerson 2001; Smit et al. 1996; Mougeot 1994; Drakakis-Smith, 1992). The literature from the continent further reiterates the fact that in South Africa urban agriculture is not about being a

household hobby and a pleasant and subsidiary activity as is the case with many food and community gardens in developed countries in the world.

Poverty is a key factor which underlies the key determinants of food security (Bauta et al., 2008: 5). Urban poverty however has suffered from a severe lack of attention by both academia and decision makers over the past few decades with the general image being that urban dwellers enjoy a better life than those who live in rural areas (Elhadary et al., 2011: 64). Given this lack of attention, if policy makers and development implementers are to further our knowledge in this arena it is key for there to be an understanding of the differences between the rural and the urban poor. Though a substantial proportion of the world's poor occupy rural areas, available evidence indicates that the proportion of the poor in urban areas has been increasing at a rapid rate due to urbanisation (Ravallion 2007: 16). With increasing globalisation the spaces of urban and rural are becoming increasingly closer to one another and are hybrid spaces; however the experiences of the poor remain very different. This is further complicated by the fact that it is no longer possible to assume that landscapes and livelihoods logically fit together – agricultural landscapes and natural resource based livelihoods are increasingly permeating the urban space. According to Sen (1999), poverty can be understood as the deprivation of basic capabilities that provide a person with the freedom to choose the life he or she has reason to value (Elhadary et al., 2011: 65).

If we apply Sen's logic to the South African context it is interesting that in fact South Africa is capable of providing enough food for its entire population. Despite the production capability however, other issues such as distribution, availability of food and unemployment means that at least twenty percent of South Africans (about five million people) have insufficient access to food. This figure translates to fourteen million people in South Africa who are vulnerable to food insecurity (Food Bank South Africa, 2010). These figures extend across both the rural and urban environments. It is widely recognised that beyond meeting the basic needs, food and nutrition are very important to peoples' general health and for the management of chronic illnesses such as HIV/AIDS, TB, diabetes, obesity and cardiovascular

disorders. There is a wealth of international writings, interrogating the role of urban agriculture in cities of the world and specifically their link to poverty alleviation and food security (Rogerson, 2003; Mougeot, 2002; Nugent, 2002; Windberg, 2001). These studies all show a clear correlation between low intakes of fruits and vegetable, energy and micronutrients and poverty (Wills et al., 2009: 7).

As a poverty alleviation strategy I define urban agriculture as offering two key contributions: food security through stable food supply and increased nutrition and an income and employment generating activity. In terms of the income which is provided to the members engaging in urban agriculture this is an alternative source of income for those with no access to a reliable or adequate level of formal wage income (Slater, 2001: 636). Despite the reduction of poverty and inequality being central to the South African government development mandate since 1994, the number of people suffering from poverty is still alarmingly high. In 2005 approximately thirty percent of the South African population lived in poverty and this increased from the 1997 levels (Rudolph et al., 2008: 8; Stats SA, 2000:1). Caught in the “poverty trap” of unemployment and sickness are the most vulnerable groups in society children, elderly and people living with HIV/AIDS (PLWHA) (Armstrong et al., 2008: 23). Due to the disparity in regional development and the inequality in the distribution of social services large groups of rural people have been forced to migrate towards the urban areas in South Africa (Elhardary et al., 2011: 67). The Gauteng province in South Africa whilst being one of the richest provinces (accompanied by Western Cape), still houses one sixth of the total poor population in South Africa<sup>3</sup> (Armstrong et al., 2008: 10). Within the Gauteng province the inner city of Johannesburg (the location of this research) has the highest percentage of people struggling with poverty and access to food (Rudolph et al., 2008: 17).

There is still a lack of commitment towards the implementation of redistributive urban development within South Africa. Responses to poverty vary across cultural, racial and

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<sup>3</sup> This study draws mainly on the findings of two household surveys recently undertaken by Statistics South Africa: Income and expenditure survey of households 2005/06 (hereafter IES2005) and the General household survey 2006 (hereafter GHS2006). The findings of the two surveys were released on 24 July 2007 and 4 March 2008 respectively.

religious divides – as Johannesburg is a cosmopolitan city there is a wide variety of responses to poverty (Beall et al., 2000: 389). The livelihoods approach provides a framework against which poverty can be understood through the illustration of the diversity of deprivations households face (Dijk, 2011: 102). However it should be noted that the livelihoods approach has been critiqued for its myopic focus on households which leads to methodological individualism and ahistorical analysis. Thus for the purpose of this literature review, the livelihoods approach has been subject to a more comprehensive and sociological conceptualisation to understand the structural determinants and power relations between and within communities (Dijk, 2011: 103). If we look towards the food production system and we look at the relational components, material well-being simply cannot be understood as a solo product. In addition to needing dual sources of income, one's livelihood further extends to the diversification and specialisation of ones work. If we address the vulnerable and poor within society it is only through the interactions of components within the system that sustainable food production can take place. Whilst one may have money to buy food, others need to grow it, others need to transport it and yet another group still have to offer it up for sale (Dijk, 2011: 103).

Within the literature on urban agriculture and poverty alleviation there is some contradiction – despite the activity being lauded as a pro-poor development strategy, little research (particularly in Africa) quantifies the economic benefits of the activity (Rogerson, 2003: 132). This emphasises the need for livelihood strategies to be seen as a series of individualised events (Beall et al., 2000: 388). In general there is little aggregation of the activity, with few studies having calculated household consumption, the percentage derived from urban agriculture and/or the percentage contribution to real income. Where there is data – it shows mixed findings of the significance of the contribution from urban agriculture towards household food consumption. A study from Lusaka, Zambia shows that approximately thirty three percent of food consumed by poor households came from urban cultivation (Sanyal, 1987). However other studies from Harare, Zimbabwe indicate that subsistence food consumed in the urban area does not necessarily have urban origins (Drakakis-Smith, 1991: 55).

Slater's findings from South Africa show that there is very little contribution of urban agriculture towards food consumption and associated household income or expenditure substitution (Slater, 1994). A study in 1993 in Imizamo Yethu, a site-and-service settlement in Hout Bay, found evidence of the limited contribution of vegetable production to household income or expenditure substitution (Slater, 1994). In South Africa in the townships of Alexandra and Orange Farm and the inner city of Johannesburg the contribution of self-grown food is generally infrequent. It seems as if urban agriculture has marginal importance for day-to-day provisioning of food (Rudolph et al., 2008: 27). With this in mind, one questions whether Siyakhana urban food garden assists those struggling with poverty and access to food in the inner city? The results from the field work demonstrate that the garden provides the beneficiaries (the Siyakhana community) with supplementary food on a weekly basis, which assists them in the provision of food. The Siyakhana community consists of the Siyakhana group (eight principals who run ECDCs in the inner city of Johannesburg) and the gardeners who work in the Siyakhana food garden. However for the purpose of this research which explores the links between community development and urban agriculture, income generation and production for the market are not seen as the benchmark by which other benefits of urban agriculture are measured. Rather it moves beyond the paradigm of producing food to gain a more holistic and accurate understanding of the benefits of urban agriculture for low to middle income countries.

Of the Siyakhana community who benefit from the produce of the urban food garden, the gardeners primarily use the food to feed themselves and family members. The Siyakhana group on the other hand share the food amongst the children, teachers, friends and parents who are sick or struggling. It is argued by the Siyakhana project, however, that the value of the food from the Siyakhana food garden is more than just supplementary food. It is organic food which has high nutritional benefits and the associated health benefits. All of the members of the Siyakhana group stated that "the food was fresh and tasted better than the vegetables off the street" (Sachs, 2010: 45). "A frequent association given with the food was the medicinal purposes and health benefits" (Sachs, 2010: 46). This is extended further by

the Siyakhana initiative who are of the opinion that urban agriculture thus has a positive impact on public health, through the improved nutritional status of children, particularly among the lower socio-economic status group (those in the inner city who would otherwise not have access to fresh fruit and vegetables).

It should be noted however that in the literature the correlation between urban agriculture and a higher nutritional status is a highly contested issue (Madaleno, 2000; Webb, 2000; Ellis et al., 1998; Maxwell et al., 1998; Karann et al., 1998; Drakakis-Smith, 1993; Cleveland et al., 1985). No research has quantitatively measured the impact of urban agriculture on child nutritional status (Bengnwi, 2009: 31). The gap in the literature highlights this as a future area for investigation, particularly looking at the difference between the nutritional values of organic food versus commercially grown food on child nutritional status. This area of investigation will not however be explored within this study.

Thus far I have investigated the widely stated economic benefits of urban agriculture, in particular the role which it can play in poverty alleviation strategies as a means to food security and an income generating strategy. I have explored the disjuncture which exists with regards to the extent of urban agriculture contribution to household contribution and the actual incidences in South Africa. I am now going to proceed with exploring one of the key objectives of this study – namely the social benefits of urban agriculture and the connections and ways in which it can contribute towards community development.

The social benefits of urban agriculture particularly in developing countries have been infrequently recorded in the literature with the majority of studies being overwhelmingly focused on food security and economic survival (Dawson, 2008; Slater, 2001; Rogerson, 1996a; 1996b). This gap in the literature calls for the need to understand the benefits of urban agriculture beyond that of the quantitative measure of income generation and production for the market and to focus on the multiple social, environmental, educational and cultural benefits which the activity can offer (Dawson, 2008: 38). Given the findings of both Slater (1994) and Rudolph (2008), that the economic benefits of urban agriculture may

in fact often be less directly related to monetary gain, I was interested in exploring the social benefits that may in fact be more substantial and evident. A key study which informed Slater's findings of the social benefits of urban agriculture was performed in Cape Town with the aim of understanding why people sought to grow food crops (Slater, 2001: 635). The key findings of this study were that through using life histories it was possible to see the ways in which women were becoming empowered by their gardening activities and furthermore that the women engaging in urban agriculture gained pride and self-worth through their capacity to produce fresh vegetables (Slater, 2001: 648). The urban gardens were an expression of women's greater sense of stability as urban dwellers (Slater, 2001: 648). I thus engage with the findings of Rudolph and Slater and understand the other benefits (aside from just the produce and related economic benefit) which are offered in this case to the Siyakhana community involved with the Siyakhana initiative. Importantly I use the literature to help me understand whether the social benefits are greater than the food production aspect of the garden (Moskow, 1999; Eberhard, 1989).

Of the studies performed on the social benefits of urban agriculture the majority of these are from developing countries where urban food gardens are highlighted as sites for community building and networking (Kingsley et al., 2006; Glover, 2004). This body of literature further discusses the self-worth and empowerment which arises from participants' involvement in the shared act of gardening (Glover et al., 2005). It is argued that for these community gardens (which are located in developed countries) it is more about the community than the gardening (Wills et al., 2009: 2). The implication is that the benefits derived from the activity are related to the implementation and management of processes, which facilitate community pride, development and social cohesion rather than solely the produce from the garden (Eberhard, 1989).

Wills et al., while recognising the importance of food gardens on the community, advocate that the Siyakhana project is an example of an urban food garden, whose purpose is the production of food, rather than a community garden where social interaction is of equal importance (Wills et al., 2009: 8). The findings of this research challenge this assumption



and I argue that the Siyakhana project is a perfect example of an urban food garden in which the social benefits (that are so often attributed to “secondary” benefits) are in fact the most important or at least an equally important part of the garden. This argument is based on the fact that there are numerous examples of where the project has empowered the Siyakhana community (and wider inner city community) through acting as a practical site for learning and demonstration trainings. In tracing the links between community development and urban agriculture, the economic benefits derived from the produce are secondary to the social benefits offered by the project. These social benefits for the community and beneficiaries are largely related to the processes involved in the establishment and running of the food garden which facilitates the environment for empowerment to take place. This research therefore builds upon Slater’s work which has demonstrated that a unique type of empowerment is located in the South African context; urban food gardens provide solace from both the trauma and daily stresses of township life (Slater, 2001: 643). For disadvantaged groups such as female headed households, recent immigrants, the elderly and the disabled, urban agriculture presents itself as an adaptive strategy (Rogerson, 2003: 133). This is particularly relevant for the Siyakhana group as their exposure to the urban food garden provides the opportunity for them to successfully combine their multiple roles in subsistence, production and as educators (Hovorka, 2002).

The literature which discusses the social benefits of urban agriculture shows that food gardens are not simply production mechanisms but rather demonstrations of the total dynamic – human and non-human. It is through this dynamic that urban food gardens provide the environment for many forms and types of empowerment to take place. One of the dynamics which plays out within the city is the way in which urban food gardens create green spaces. Local food production can also help towards reducing long distance food supply chains from non-organic agricultural sectors which results in a massive footprint (Swilling, 2006: 48). Urban agriculture contributes to an ecologically sound environment which can significantly improve the living conditions of the community by safeguarding resources such as air and water (De Zeeuw et al., 2002: 163). The literature suggest that “urban agriculture is the largest and most efficient tool available to transform urban wastes

into food and jobs, with by-products of an improved living environment, better public health, energy savings, natural resources savings and urban management cost reductions” (Smit et al., 1992: 152).

Neighbourhood quality and quality of life are interconnected with a coherent neighbourhood spirit, having the potential to increase the development of the community (Holland, 2004: 297). In fact community participation is a key element of Health 21, the WHO strategy for Health-For-All in the 21<sup>st</sup> century and of Local Agenda 21 (Breuer, 1999: 1). The Healthy Cities Project is based on the principles of both of these strategies and community participation is therefore fundamental to achieve health and sustainable development at the local level. In South Africa whilst the current urban planning agenda is orientated towards building Johannesburg into a world class city, implementation of the principles of empowerment and growth at the local level are not yet evident. To capture these principles of urban growth and development, the state and society need to strive towards focusing on a solely economic understanding of urban life, towards fostering the environment for community development and greater empowerment of the working class and urban poor. At the policy level there is recognition by the South African government of the possibilities which urban agriculture holds in terms of addressing persistent urban problems demonstrated in the draft National Strategy on Sustainable Development and Action Plan 2010-2014 (Gauteng Province Department of Economic Development, 2010). However to date the implementation of an integrated strategy towards urban agriculture is not yet evident on the ground.

Apart from the healthy environment which urban food gardens create, another social benefit which green spaces offer the urban environment is access for communities to natural settings for leisure and recreation (Wits HPU Food Garden Project, 2009: 4). Within city development strategies and policies the importance of green spaces continues to be underestimated (Wits HPU Food Garden Project, 2009: 4). The Siyakhana food garden project is a working and successful example of how urban revival can be accompanied by community development. The establishment of the Siyakhana food garden was facilitated

through land transformation and improvements, and from making use of sustainable technologies such as water recycling, harvesting and organic fertilisation (Bauta et al., 2008). The cleaning up of this former dump site and the transformation into a green and productive space has improved the living climate, while strengthening the self-confidence and organisation of the local citizens (spurring other local initiatives) (Bengnwi, 2009: 28).

In particular the strategic location of the Siyakhana food garden allows for accessibility by the local inner city residential community as well as the extended network of the Siyakhana group (who all reside in high density accommodation in the inner city). The high visibility of the food garden provides the arena in which the collective impulses of the multiple users of the park can take place (Amin, 2008: 8). This study provides a concrete example of the manner in which collective responses are largely as a result of the pre-cognitive and tacit human response to a condition of “situated multiplicity” (Amin, 2008: 8). Whilst the abstract notion of “situated multiplicity” makes it difficult to define, the literature describes it as a “thrown togetherness of bodies, mass and matter, and of the many uses and needs which exist” within a location (Amin, 2008: 8). Through the principles of permaculture and mixed land use, combined with the through flow of people which come to the park and garden a sense of “situated multiplicity” is created. Every morning the gardeners prepare a herbal tea, which is used to cleanse their bodies and help give them strength for the physical work of the day (Sachs, 2010: 47). This herbal tea is an example of one medium within this environment through which the “situated multiplicity” is shared with multiple visitors to the garden (including the City Parks officials). The virtue of the Siyakhana food garden to the community is that it is a unique integration of “food, medicine and spirituality” and aesthetic beauty (Sachs, 2010: 60). The aesthetic beauty of the garden brings the stakeholders and beneficiaries closer to the landscape and contributes to engagement and participation (Sachs, 2010: 60). The majority of the children who attend the ECDCs in the inner city do not have the opportunity to experience space and nature (Sachs, 2010: 48). The Siyakhana food garden through its aesthetic appeal and permaculture design also provides an educational component and serves as a bio-tourist attraction (Wits HPU Food Garden Project, 2009: 4).

Whilst there are numerous examples of the positive contributions of urban agriculture in the literature, critiques of the activity also exist. Over the past few decades the attitudes of governments and development institutions towards urban agriculture have not always been positive (Rogerson, 2003; Slater, 2001; Mbiba, 1994). The first major critique of urban agriculture is that the environmental and health impacts of urban agriculture can be negative. Increasing concerns over food safety, particularly contamination from the use of untreated wastewater for irrigation in urban agriculture can dissolve the benefits of the transformation into a “green” space (Bengnwi, 2009: 31). However as more cities are reviewing and adapting technical planning norms to facilitate urban food production it is evident that there are multiple ways in which the environmental and health impacts of urban cultivation can be managed (Mougeot, 1991: 18). Urban land management and waste management are examples of ways in which the risks of the activity can be managed. Separation at source of compostable waste and decentralised community-scale systems for treatment and reuse is a technique for risk mitigation (Mougeot, 1991: 22).

Given the many ways in which the risk of urban agriculture can be mitigated I asked the question as to whether the negative attitudes towards the activity are fuelled by the discourse on “Third World Cities” and the association with the informal economy? The “Third World Cities” and discourse on the informal market has a tendency to highlight the differences between cities in poor countries and those in wealthier countries (Parnell et al., 2006: 338). The negative perception of the “Third World City” discourse is particularly true for unplanned/subsistence urban agriculture which is seen to (and often does) belong to the parallel economy. This is ironic as the majority of all urban agriculture which takes place in developing countries is a pro-poor strategy and therefore belongs to the parallel economy.

It is largely as a result of the lack of urban infrastructure within the inner city of Johannesburg that citizens have no other option but to resort to survivalist strategies. It is this adaptive strategy which implies criticism of the work of urban authorities themselves and hence the deeper and negative perception of urban agricultural activities (Slater, 2001: 637). Thus the purpose of adopting the livelihoods approach for framing this discussion is

not to romanticise illegal or anti-social behaviour but rather to provide an understanding of how the poor live and the challenges they face. By developing such an understanding it can assist development practitioners and policy makers to understand whether development efforts will enhance, erode or ignore existing strategies through which the poor make a living (Beall et al., 2000: 388).

Across the continent of Africa there are various different responses by urban authorities to the practice of urban agriculture. In Accra, Ghana and Cairo, Egypt there is no explicit policy and although urban agriculture is practiced it is not significant (Greenberg, 2006: 12). In Nairobi, Kenya the regulations initially forbade urban cultivation but because of the large numbers of people engaging in the activity, the authorities were forced to allow it to continue (Greenberg, 2006: 12). As there is no support from urban authorities in these strategies the result is that cultivated areas in cities can attract vermin, rodents and flies or provide breeding grounds for them, thereby contributing to the spread of certain diseases (De Zeeuw et al., 2002). The Siyakhana food garden however disproves the assumption that activities in the parallel economy (in this case urban agriculture) are illicit, unregulated and immeasurable. Rather than signalling a form of erosion of both state authority and capacity, the Siyakhana food garden has worked with the urban authorities towards a sustainable rejuvenation of the public space (Tambwe, 2010: 64).

Based on the literature reviewed, urban agriculture has an important place in addressing the diverse and complex urban needs. The multi-functionality of the activity gives it the potential to provide economic, social and political benefits to beneficiaries. Whilst this literature review explored all of the benefits of the activity an emphasis was placed on the need to re-focus efforts towards exploring the social benefits as well. Some of the benefits which were explored in this literature review include the activity as a survival strategy for the poor, poverty alleviation, a social integration tool for disadvantaged groups within the community, employment, skills transfer, capacity development and food security (Bengnwi, 2009: 39). The literature has provided me with the context against which to analyse the

social benefits and linkages to community development of the Siyakhana project and its food garden.

### **Community development, participation and empowerment**

Alternative approaches to development have been concerned with introducing alternative practices and redefining the goals of development (Pieterse, 2000: 344). Development is not what it used to be and it may be argued that the key question is rather whether growth and production are considered within or outside the people-centred development approach and whether this can rhyme with the Structural Adjustment Programmes (SAPs) followed by the international financial institutions (Pieterse, 2000: 344). Arguably, alternative development has succeeded in the sense that key elements have been incorporated into development literature. It is now widely accepted that development efforts are more successful when there is participation from the community (Pieterse, 2000: 344). Bottom-up participatory development gained popularity in the 1990's influenced in part by the introduction of new indicators to measure development coupled with an era of state failure and panic over top-down modernisation approaches. Twenty years later however – innovations and changes to development challenges have emerged, but these are still based on the premise behind the bottom-up development approach. The same elements keep coming back: “equitable, participatory and sustainable human development” (Arruda, 1994: 13). It is in part the continuous resurgence and the interchange ability of development concepts that have rendered them “fuzzy” concepts as used by international development organisations and the wider development community. Such is the result that when discussing bottom-up development it is mired with multiple meanings that variously wax and wane in their discursive influence (Eyben et al., 2009: 285). This is not to say that such concepts do not hold value but rather to highlight the importance of choosing words with care when analysing theory against practical application.

Within the development arena there has been a shift in thinking towards a sharper and more assertive positioning of alternative notions of development as a result of several trends (Pieterse, 2000: 350). The first is the huge growth of the NGO sector in numbers and

influence which generates a growing demand for strategy and therefore theory. Secondly, the importance of environmental concerns and sustainability has weakened the traditional economic growth paradigm and given further fuel to alternative and ecological economics. Finally the glaring development failures of several decades have contributed to unsettling the mainstream paradigm of growth. These trends coupled with other country specific factors have led to a redefinition of the traditional development goals. Development is no longer viewed as GDP growth, rather human development is a more appropriate indicator of development (Pieterse, 2000: 344). Sen's capability approach forms the basis of the human development approach. It provides a critique of traditional approaches to development arguing that well-being is not necessarily associated with opulence and/or utility but rather human capabilities and substantive freedoms which people have come to value (Clark, 2005: 1341). Over time the human development approaches have become iterative and accompanied by further testing and refinement (Mosedale, 2005: 247). This is not to say however that the challenges of conceptualisation and measurement with key concepts such as participation and empowerment have been resolved (Malhotra et al., 2002: 34).

It is for this reason that the literature provides the back-drop against which to understand these changes and developments that have taken place in the realms of community development, participation and empowerment over the past twenty years. The aim of this section of the literature review is not only to contextualise these development "buzz words" but also to understand their application to the case study of the Siyakhana initiative. The purpose is also to understand the difficulties associated with the measurement of such concepts and how these can be partially overcome through the application of different methodologies. There is an intricate link between the case study and notions of community development as the issue of food security is in fact submerged within the intractable challenges facing development. Food security raises issues that are linked to a host of development concepts, particularly the fight against poverty (Drimie et al., 2003: 2).

Whilst some of the enthusiasm for people-centred and bottom up development may have dwindled since the release of the Reconstruction Development Plan (RDP) popular

participation still holds influence over development thought in South Africa (Emmet, 2000: 501). Conceptions of civil engagement such as community-based or people-centred development, citizen participation and public–private partnerships can be found in many, if not most, of the policy documents of the post-apartheid state (Emmett, 2000: 501). Notwithstanding the broad support and frequent calls for more “authentic” community participation, the concept of participatory development is fraught with practical and conceptual difficulties. These calls are further aggravated by the fact that within any development intervention, the donors, the implementing partners and the target groups all have their own agendas, as well as the ability to manipulate the development processes for their own ends. To this end, all these groups are guardians in one sense or another, however the experience shows as that it is to a large extent the values of the donors and implementing partners that shape development intervention rather than that of the community (as the intended beneficiary) (Porter et al., 2009: 290).

The process of community development focuses on the individuals and the micro level of society, with social development focusing on the structure and the macro level of society (Zadeh et al., 2010: 67). For the purpose of this research the focus is orientated towards community development and on the beneficiaries and staff of the project (Siyakhana group, gardeners and other staff members) with urban agriculture being situated within the wider macro structures and policy frameworks. According to Cavaye community development is “a process which is conducted by community members where people contribute towards creating change and enabling their community to manage the change in a sustainable manner” (Cavaye, 2011). Whilst still very popular within the development lexicon community development is not without criticism. The primary criticism directed towards the term relates to the homogenous use of the term “community” and the failure to recognise and relate to the individual within the community. Community participation however remains a popular tool for achieving bottom-up development despite the fact that in practice it continues to be fraught with conceptual and practical difficulties.



One of the conceptual difficulties associated with community participation is the fact that it is premised on the assumption that there is “a community” which is able and willing to participate in a development project or programme (Emmett, 2000: 503). There are numerous conceptual problems with this assumption not least the definition of community. Emmett (2000) and Anyidoho (2010) warn of the dangers of the use of notions and conceptions of community – with the dangers being related to problems of generalisation and romanticism (Emmett, 2000: 503). Chipkin (1996) shares similar sentiments to Emmett (2000) and Anyidoho (2010) and has demonstrated how in South Africa the notion of community has become associated with a variety of referents such as class and race. These associations echo the typical anthropological critique that groups of people and so-called “communities” are seldom **if ever** homogenous. The result is that within the development space, community participation remains a concept of practice rather than theory (Emmett, 2000: 502). Thus an increasingly dominant picture emerges – one of conceptual and theoretical poverty based on the “romanticism of populist thought rather than a serious analysis of community life and its complex characteristics and dynamics” (Emmett, 2000: 502).

Based on the critique provided in the literature and the problematic nature of using the term “community”, careful attention has been paid to the definition. For the purpose of this research when I refer to “community” I am specifically referring to the “Siyakhana community”. The Siyakhana community are defined as a “group of people who share a common interest” (Breuer, 1999: 9). In this instance the common interest is the Siyakhana initiative and the outcomes derived from being involved with this initiative. I have purposively adopted this narrow definition of community as the study does not consider the wider Bezuidenhout Valley community. Rather it is limited to those members who belong to and are recognised as beneficiaries of the initiative and/or have some type of connection to the Siyakhana initiative. The Siyakhana community are contextualised within the research to ensure that the group is not presented as a homogenous whole and to maintain their relevance and position to the much larger social structure to which they all belong (Emmett, 2000: 504). Through critical engagement with the concept a re-conceptualisation of

community has been enabled. This conceptualisation is one that understands “community” not as a homogenous and romanticised entity but rather as something which is created when individuals engage with each other in a shared enterprise – for this case study an urban food garden (Anyidoho, 2010: 319). Furthermore the multi-dimensionality of the concept is maintained and enables one to capture the complexity of horizontal and vertical relationships between the various stakeholders and beneficiaries of the initiative. Differences between individuals and sub-groups within the Siyakhana community are accurately described to avoid obscuring the differences which arise out of their membership with the Siyakhana initiative.

Now that I have discussed and understood what I mean when I am talking about “community” and “community development” the central question emerges as to what in fact is development? And how is development measured for the purpose of this study within the context of the Siyakhana initiative? The first important point to note is that one cannot separate “community development” and “development”. They are essentially the same and are based on Amartya Sen’s theory of entitlement and the capability approach. Economist and philosopher Amartya Sen is at the forefront of academic work on the role of empowerment in development and he pioneered the capability approach which is an alternative paradigm to growth-centred models of GDP orientated development (Diepeveen, 2008: 7). As an alternative paradigm Sen emphasises the importance of issues of personal well-being, agency and freedom (Clark, 2005: 1340). According to Sen development is defined as “consist(ing) of the removal of various types of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency” (Sen, 1999: 11). For the purpose of this study this definition is adopted and in particular emphasis is drawn to the manner in which people-centred and bottom-up development is interested in the means to the end and not only the end-result itself. In viewing development freedom you do not aim only for an end state: you ensure that how you get there is consistent (Porter et al., 2009: 289).

Sen's ideas have not only been used for the definition of "development" but also have informed the way in which the links between urban agriculture and poverty are understood. In the previous section of the literature review we understood that as a poverty alleviation strategy, urban agriculture can offer food security and an income and employment generating activity. Sen offers a complete paradigm shift in how we think about food security and poverty. He argues that food security is not about national food availability but rather food entitlement of individuals and groups and is thus intricately linked to entitlement theory (Drimie et al., 2003: 4).

The central tenant of Sen's theory of food security is that people are starving not because of a food availability failure but rather a food entitlement failure. Based on Sen's entitlement theory four different types of entitlements can be distinguished within the market. These are trade-based entitlement, production-based entitlement, own-labour entitlement and inheritance or transfer entitlement (Drimie et al., 2003: 6). For the purpose of this study the fundamental point is that all entitlements whether food or other is not necessarily a result of market failure. Sen shows that in order for development objectives to be met macro-level interventions need to be supported by individuals who have the freedom to explore their full potential and worth. When applying the entitlement approach to "community development" it enables us to shift our attention to the differential ability of individuals in a community to command food and other pre-requisites for human wellness. The premise of providing individuals with the ability to make a change in their own lives is central to "community development".

Sen's capability approach also has a number of tools which can be used to reflect on development interventions and the manner in which a programme or project has supported the achievement of "freedom" (Porter et al., 2009: 292). The way in which Sen frames the idea of "freedom" encourages a participatory and bottom-up approach (with a sharing of power amongst stakeholders) giving a central position to public discussion, social agitation, open debate and most importantly understanding development as freedom. "The exercise of freedom is mediated by values, but the values in turn are influenced by public discussions

and social interactions, which are themselves influenced by participatory freedoms” (Sen, 1999: 9).

Based on the review of literature of the key terms of “community development”, “development” and “participation” a common theme resonates and that is that alternative development is about **the people** and **efforts of the people**. It is concerned with people as stimulators of social action processes (Christenson, 1989). Much has been written about participatory methodologies that seek to gain knowledge and encourage development and empowerment through community sensitive approaches (Motteux et al., 1999: 261). Sen’s capability approach encapsulates the theoretical principles of many of these participatory methodologies (Porter et al., 2009: 292). The merits of various competing development approaches such as utilitarianism, the basic needs approach, and the rights-based approach are acknowledged in the capability approach and used to enrich it (Porter et al., 2009: 292). Of these approaches they are all concerned with creating an environment that provides people with the opportunity to change their lives – and if this takes place in the ways described as above we characteristically refer to it as “empowerment” of the individual or group. Empowerment takes place when it equips people with “skills and knowledge that will enable them to challenge normative values and engage more deeply in political, social and economic activities” (Diepeveen, 2008: 8). The literature shows that key to these methodologies is that when engaging with poor and marginalised groups a top-down and directive methodology which encourages dependency will never be effective or enable empowerment (Rowlands, 1995: 105).

The mission statement of the Siyakhana initiative talks to these approaches as being central to the values of the initiative: “Our mission is to establish a model urban agriculture initiative that showcases a food garden system for food production, education, research, and empowerment of the community, particularly women, through training, employment and income-generating opportunities” (Siyakhana, 2009). However as the literature demonstrates in the realm of community development and participation there are huge challenges of conceptualisation and measurement between theory and action. Thus during

this research I empirically investigate and question the relationship between Siyakhana's writings, and the actions that take place within the initiative (Bebbington et al., 2007: 598). Furthermore in the research I investigate the Siyakhana community's perceptions of "development". The literature illustrates that when it comes to notions of "development" one should be wary of concepts of opulence and utility, both approaches which Sen critiques as being too narrow to have an informational base which represents all elements of human development (Clark, 2005: 1430). The implication for the research is that based on the capability approach and other broader theories of need, the value of the food garden to the Siyakhana group is considered not only in terms of the basic need of food but also the educational, relational and capacity building role which it provides (Clark, 2005: 1355).

Drawing on key literature (Bess et al., 2009; Mosedale, 2005; Lyons et al., 2001; Breuer, 1999; Motteux et al., 1999;) the following working definition of participation will be used for the purpose of this study "participation is a process by which people are enabled to become actively involved in defining the issues of concern to them, in making decisions about factors which affect their lives and in taking action to achieve change". Participation and empowerment can only occur when a community organises itself and takes responsibility for organising its problems (Zadeh et al., 2010: 66). This involves taking responsibility and identifying the problems, developing actions, putting them in place and following through (Cheetham, 2002: 4). Furthermore community participation is about drawing on the energy and enthusiasm that exists within the communities to define what the community wants to do and how it wants to operate (Breuer, 1999: 1).

However community participation extends beyond just individuals desire for change and development and is embedding within the macro structures of society. The people-centred livelihoods approach helps one to understand the huge diversity between poor households, the multi-dimensional character of poverty and the multiple livelihood opportunities through diversification of resources (Hendriks, 2011: 112). A livelihood is defined as comprising "the capabilities, assets (including both material or economic and social resources) and activities required for a means of living" (Chambers et al., 1992). The

livelihoods approach is particularly relevant to our discussion of urban agriculture and according to Hendriks although the concept originates and is highly biased towards rural livelihoods it can be applied to the urban setting as well (Hendriks, 2011: 112). According to the literature for urban residents (such as the Siyakhana group) the most important livelihood assets are human assets and more specifically labour activities (Rakodi, 1999; Meikle, 2002). Livelihood strategies are the responses of the poor to deprivation and insecurity (Beall et al., 2000: 287). In general, (as with the trend of urban poverty) urban livelihoods are less understood than rural ones. Intra-household and inter-generational livelihood strategies in the city are poorly understood (Beall et al., 2000: 288). However for the purpose of this discussion and to situate development within the context of urban poverty it is also essential to consider the institutional dimension of inclusive urban policies and development. In the past the livelihoods approach has been criticised for not situating institutions and structures within broader relations of the political and cultural economy (Hendriks, 2011: 117). The literature demonstrates that poverty reduction and development does not only require “good” policy, but also capacity building of the poorer people to influence, to have a voice and to hold accountable policy decision makers (Green et al., 2005: 870).

NGOs and development institutions affect policy decisions and thus they play a central role in supporting individuals and communities with appropriate external support and intervention to encourage bottom-up and participatory development. Furthermore they can assist in speeding up the process of empowerment and encouraging it (Rowlands, 1995: 105). It is recognised that empowerment and community development by definition cannot be imposed or dispensed in practice. The livelihoods framework has also helped us to understand that in reality not all members of a community have equal opportunities to define what they want to do to achieve change and transformation and how they want to achieve this (Mosedale, 2005; Couto, 1998; Oxaal et al., 1997; Asthana, 1996). Thus one measure of urban poverty can be conceptualised as a lack of access to assets, and a result of multiple and interacting economic, social, infrastructural and environmental factors, embedded in a complex local reality (Rakodi, 1999).

Empowerment is not a product but rather an ongoing process of multi-dimensional change with many varied processes and outcomes (Mosedale, 2005: 244). It is because of this nature that it makes it so difficult to measure empowerment coupled with the complication that it can operate at the level of the individual, the organisation or the community (Smith et al., 2007: 7). According to Laverack there is a dynamic continuum along which empowerment progresses, moving from individual to small groups to community organisation to partnerships and finally to political action (Laverack, 2001). However this is not widely shared in the empowerment literature – with the dominant rhetoric being that through participation individuals and communities understand their own situations and gain increased control over their lives – but this does not take place according to a defined continuum (Smith et al., 2007: 6).

Development experience and literature highlights the multiple ways in which NGOs and development institutions have incorrectly attempted to implement and execute bottom-up and participatory methods in the past. Reflecting on the work of Sen, if we are to learn from these experiences we must take into account a broad array of information in order to understand the manner and consequences in which the development took place (Porter et al., 2009: 293). This is particularly true when it comes to where we place the individual (who as we understand is the subject of all development initiatives) in the development process. Community members are not necessarily a single unit of people who are moving harmoniously towards a common goal, or a grouping of atomised beings who make choices independently from each other. Anyidoho (2010) argues that there is pressure towards conformity in thought and behaviour, and the “agentic subjectivity of the individual” is lost in the process (Anyidoho, 2010: 321). Thus the literature highlights the importance of the ways in which we define community and shows that community participation is not as simple as just the nature and the extent of participation. However the studies have proven that the greater the extent of participation the more sustainable the nature of the development gains (Bess et al., 2009, Lyons et al., 2001: 1248). The literature demonstrates that these deficits in theorising the individual as a participant in development leaves a huge

conceptual gap in the discourse of participation (Anyidoho, 2010: 321). The NGOs and development partners are thus ill-equipped to support the individuals of communities whilst they recognise that within the politics of participation not all members participate and at an equal level of participation they cannot resolve this as they do not understand the “non-project nature” of the people’s lives (White, 1996: 7).

The importance of participation in achieving empowerment is well illustrated within the case study where amongst the Siyakhana group there is a clear distinction between those members who participate on a regular basis in the Siyakhana initiative activities and those who do not. There are various reasons for the differing levels in participation including poor health, cost of transport, lack of spare resource at the ECDC and other commitments. The unequal and varying level of participation of the Siyakhana group has an effect on the empowerment potential the project holds for each member of the group. It should however be highlighted that within the literature different levels of participation can be identified. According to White there are four different types of participation; nominal, instrumental, representative and transformative (White, 1996: 7).

In the case of nominal participation there is no downward accountability from the NGOs or development partners. Participation of this nature is largely as a function of display because it serves interests, provides exposure and can be seen to have a “popular base”. Nominal participation can result in a type of forced labour, where community members already with inadequate time or resources to make a living are forced to use some of their scarce resources on something of no value to them. In general however both instrumental and nominal participation can have some of these negative consequences but the real danger with these two types of participation lies with the nature of the NGO or development partner. In the situation where there is a transient development partner communities are left with nothing with which to participate. Thus it becomes very difficult if not impossible to switch from the dependency of nominal participation to real empowerment (Maudlin et al., 2004: 539).



On the other hand representative and transformative participation enables sustainability in which the community is able to continue and expand the development activity without continued outside input from NGOs or development partners (Maudlin et al., 2004: 593). With this type of participation the NGO or development partner supports the project through a formal structure and “downward accountability” for maximum delivery of empowerment outcomes (Kilby, 2006: 951). Therefore accountability is not simply discretionary and little more than “grace or favour”, but transparent and susceptible to scrutiny and some degree of control by its members, constituents, or beneficiaries (Kilby, 2006: 953; Mulgan, 2003: 137). The Siyakhana initiative is characteristic of this type of formal structure accompanied by formal mechanisms of shared control in place, with regular (at least monthly) meetings in which the members of the Siyakhana group have the chance to set the direction and question the actions of the project leaders and stakeholders. Characteristically nominal and instrumental participation take place at the onset of the project, developing into representative and finally transformative participation as the project progresses and becomes sustainable in nature.

This literature has explored alternative development concepts of community development, empowerment and participation. The literature which was analysed has helped me to understand what these terms actually mean and how they apply to the research study. Whilst all of these concepts are “buzz” words within the development rhetoric and may hold value they are not without their criticism. This criticism has been understood and analysed and particular attention was paid to the way in which “community” is so often defined in a homogenous manner in the community participation rhetoric. This section of the literature review has illustrated that community development; empowerment and participation are multi-faceted and on-going processes. None of these concepts can be forced upon any individual or group, rather central to the success of all these types of development models is bottom-up and people-driven development. Against these development models I have also investigated the multi-functionality of urban agriculture in both economic and social spheres and indicated the need for further investigation of the social benefits provided by the activity. The research will further investigate the way in which these benefits as understood

in the literature are translated into the experiences of the Siyakhana community through their interaction with the practice of urban agriculture.

### **Chapter 3: Research methodology**

This study investigates how urban food gardens and community development are connected through the analysis of the Siyakhana initiative case study. In order to understand if there are any connections between the two, I have investigated the ways in which the Siyakhana food garden (and other complementary activities of the larger initiative) have (or have not) contributed to community development. Based on the literature review and the large criticism waged against the term “community”, a narrow definition of “community” has been adopted. For the purpose of this study, when referring to “community”, I am referring to the Siyakhana community whose connections and interactions are based on purpose and association with the food garden in Bezuidenhout Valley (Tonkiss, 2003: 298). As the literature has demonstrated urban food gardens have a multiplicity of purposes and benefits which are offered to the surrounding community and those directly and indirectly involved in the agricultural activities. According to the Siyakhana initiative the main ways in which the food garden benefits the Siyakhana community is through improving the availability and accessibility of fresh food, networking, conscientisation and mobilisation and research and education (SIEHFS, 2009: 5). In order to explore the above stated benefits and understand if they have been transmitted to the Siyakhana community, the design of this study focused on the Siyakhana group. This group has been chosen as they are the primary beneficiaries of the food garden.

#### **Case selection**

Whilst the single case study method was adopted for the purpose of this study, investigation into the transdisciplinary approach took place. The transdisciplinary methodology has been developed to justify the co-production of knowledge and therefore co-ownership of the results specifically for the purpose of effecting change by both researchers and practitioners. Within the transdisciplinary research methodology the problem statement would have been derived from engagement with stakeholders. However I have chosen the traditional accepted approach in academic research with the problem statement being

derived from the literature review. Within the single case study method there was still room for an interdisciplinary approach which made use of shared concepts across a multiplicity of disciplines (Madni, 2007: 3).

For the purpose of this research I have focused on a particular case study which involves an urban food garden and a targeted group of primary beneficiaries. By adopting this case study it has given me the opportunity to explore and better understand how urban food gardens and community development are connected. I have established the experience of the Siyakhana group through their involvement with the Siyakhana initiative. This is community based study which describes and analyses the patterns of and relations between the beneficiaries and urban food garden. I look at the experiences of the beneficiaries (which are representative of a larger inner city community) and establish if through their involvement with the food garden there is evidence of community development taking place.

The findings of this study do not however suggest that the experiences of these beneficiaries are the same for all persons who are involved with urban food gardens. It does however enable one to explore and reflect on the successes and challenges with which the case is faced, and understand the larger aspects of community development which are at play. I have provided a detailed account of what is happening on the ground and what the beneficiaries and wider community are actually doing, with accounts of real events that took place over the period of my research (Burawoy, 1998: 5). This approach is derived from Burawoy's extended case study method and is guided by theory. The theory obtained through the literature review provided the situated knowledge which I used to examine the social processes of community development and locate them within their wider context determinations (Burawoy, 1998: 21).

The Siyakhana food garden is located at the periphery of the inner city residential neighbourhood known as Bezuidenhout Valley. It is an area which has multiple development challenges. **(Refer to figure 1. Map of the Siyakhana food garden and the EDCs)** (SIEHFS, 2009: 2). These challenges are not unique to the area and can be found within other

urbanised parts of South Africa. The challenges include food insecurity, poverty, unemployment and insufficient urban infrastructure. The value of using this case study is that there are many successful elements within the model that could be replicated for other development initiatives. A major strength of this case study is that the beneficiaries (the Siyakhana group) have been involved with the food garden for six years. This is a substantial timeline against which the initiative can be analysed against milestones of community development and it provides an idea for longevity and sustainability of similar initiatives.

## **Site, sample and period selection**

### **Site selection**

Whilst there are many examples of urban food gardens in Johannesburg and South Africa (primarily on a subsistence level), for this particular research a very specific case study was required. As I have identified in the literature review and theory on community development, participation and empowerment all of these concepts are continuous and on-going. Thus in order to identify and measure these elements, a well-established project was required for the case study. Being in its sixth year of operation – the Siyakhana initiative was well suited and provided an ideal project against which the connections between community development and food gardens could be examined.

By selecting the Siyakhana food garden it was possible to isolate the effects of the garden on a particular segment of the community through the direct beneficiary target of the Siyakhana group. The Siyakhana group provides a representation of the larger inner city community and due to the relatively small size of the group (eight members) it made it possible to analyse the benefits of their involvement (and their wider network and community) with the urban food garden. All members of the Siyakhana group operate Early Childhood Development Centres (ECDCs) within the inner city. **(Refer to figure 1. Map of the Siyakhana food garden and the ECDCs).** In the research I situate Bezuidenhout Valley and the inner city locations of the ECDCs within Johannesburg's spatial organisation to

understand the group's ability to participate in the urban economy and thus on their ability to access food (Rudolph et al., 2008: 20).

The inner city is "strategically important to the city as a whole" and the revitalisation thereof is a "catalyst for economic growth and job creation, as well as for creating a work and living environment that was secure and decent" (SIEHFS, 2009: 3). Johannesburg as a city assumes national significance given the proportionate size of the population of the metropolitan area (and its economic importance) (Beall et al., 2000: 380). According to Beall et al. approximately one in five South Africans live in the greater Johannesburg area (Beall, 2000). Furthermore the inner city is particularly important for the location of urban food gardens as it has the highest percentage of people significantly struggling to access food (Armstrong et al., 2008). During the research period two of the ECDCs (Kideo and Downtown) moved premises – all the data provided in the research is based on the new locations of the ECDCs.

Figure 1. Map of the Siyakhana food garden and ECDs





Purposive sampling was adopted for this research, with the selected participants being the Siyakhana community. When referring to the Siyakhana community I have purposively adopted a narrow definition of “community” as the study does not consider the wider Bezuidenhout Valley community. Rather it is limited to those members who belong to and are recognised as beneficiaries of the initiative and/or have some type of connection to the Siyakhana initiative. The Siyakhana group are the primary beneficiary of the Siyakhana initiative and the group consists of principals from each of the following Early Childhood Development Centres (ECDCs): Casita de Chocolate Pre-School, Downtown, Kideo, Little Eagles Daycare and Pre-School, Love Peace Educare and Pre-School, Mai Mai Khuthala Pre-School, Silindokuhle, The Little Roses Daycare and Pre-School.

For the purpose of this research an ECDC refers to “any building or premises maintained or used for the care of children. It includes a playgroup, crèche, aftercare centre, Pre-School and nursery school or similar” (City of Cape Town, 2003: 1). Whilst ECDCs can operate under a variety of names, in this study all of the facilities of the Siyakhana group are referred to as an “ECDC”. All ECDCs of the Siyakhana group provide full-day care for children between three months and seven years and the members of the Siyakhana group are the principals of their respective child care facilities.

From discussions with the Siyakhana group, all members reminded me why they originally joined the project and wanted to be involved with the food garden. The reasons were related to the possibility for increased food and the improvement of health and well-being through the consumption of organic and healthy food. Formal consent was provided to use the names of the ECDCs involved in the project, however for confidentiality the names of the principals of the ECDCs have been placed under pseudonyms. The secondary beneficiaries of the food garden (eight full time gardeners) were also involved in the research. Other members of the Siyakhana community who were involved were the Wits head office staff including the project director, programme manager, stakeholder engagement manager and project manager.



The data was collected for a twelve month period from June 2010 to June 2011. In total the food garden was visited approximately thirty times during the field work and the EDCs approximately twelve to fifteen times each. This relatively long period of study was particularly useful in establishing the links between the Siyakhana group and community development. Community development is an on-going process which does not take place overnight. Furthermore it is highly dependent on the context in which the participants find themselves. Based on the literature in some communities, processes of community development and change can take place in a relatively short period of time (one to three years) whilst in others changes may evolve over decades (Malhorta, 2002: 19).

During the study there were two clear phases which could be distinguished:

- Phase one (June 2010-September 2010). No or very little food was distributed to the Siyakhana group; and
- Phase two (September 2010-June 2011). Regular and increased volume and quality of produce distributed to the Siyakhana group.

These two phases enabled me to observe the attitudes and behaviours of the Siyakhana group during both periods. With the marked change of phase two, I was able to see a material difference in the ways in which the Siyakhana food garden was helping the Siyakhana community. Lastly the duration of the research enabled me to assess the sustainability of the food garden in its contribution towards community development. It also provided a realistic timeframe against which to assess the Siyakhana group's involvement with the garden and the larger initiative and the extent to which the initiative is making a difference in their lives and their wider communities.

## Data Collection Techniques

### Participant Observation

Participant observation was the primary medium through which the data for this study was collected. All participant observation was interactive and was accompanied by informal conversation. It was through the informal conversation that the majority of the data was collected. The time which I spent at the ECDCs can be split into two main categories:

- Observation of the everyday running of the ECDCs and;
- Observation of the ECDCs during the delivery of the produce from the Siyakhana food garden.

In total I visited the ECDCs six times to observe the everyday operations and six times to observe the food deliveries. The visits to the ECDCs in observing the day to day operations were performed prior to the in-depth interviews. During these visits I sat in on the lessons at the ECDCs, helped prepare food in the kitchens and interacted with the children, the teachers and the principal. On average I spent three hours at each ECDC per visit. All of the time spent at the ECDCs took place in the mornings before noon as this was the most convenient time according to the Siyakhana group for me to visit. In total approximately one hundred and forty hours were spent in participant observation at the ECDCs over the twelve month period. These hours spent at the ECDCs were invaluable and provided me with insight into the lives of the group and their communities that I otherwise would not have achieved. Throughout the participant observation if I needed to take notes, I took them on my cellphone and emailed them to my email account for transcription later that day. I purposely did this as I did not want to draw attention to my presence at the ECDCs.

When performing the observation of the food deliveries I accompanied the stakeholder engagement manager (Hlangi Vundla) and two gardeners who deliver the food to the ECDCs on a weekly basis. We would meet the Siyakhana staff at the garden and then go in the Siyakhana bakkie to do the deliveries. By accompanying the Siyakhana staff on the food

deliveries I was able to observe the activities in the garden on a weekly basis and chat to the gardeners before we left for our deliveries. These trips were particularly beneficial to the research agenda as I was able to have informal conversation with the two gardeners and the stakeholder engagement manager whilst driving to the ECDCs. I then also interacted with the members of the Siyakhana group when we delivered the food to the ECDCs. During these deliveries although I only spent a short time with the Siyakhana group the regular contact helped me build and foster a relationship of trust and reciprocity with the group. The way in which I combined both formal and informal interactions with both the group and the gardeners was particularly effective as the majority of the time I learnt the most important information during my informal discussions in the garden, the car or at the ECDCs.

### **In-depth interviews**

Two interview schedules were created for the administration of the in-depth interviews, one for the gardeners and one for the members of the Siyakhana group which was based on the larger thematic ideas of community development. The in-depth interviews were a complement to the participant observation. In reality the majority of the larger questions were already answered during the participant observation sessions which took place prior to the interviews. The interview schedules were developed in conjunction with the project objectives and the findings of the existing research studies in particular findings relating to the Siyakhana group (Sachs, 2010; Bengnwi, 2009; Wills et al., 2009; Bauta et al., 2008; Dawson, 2008; Chinemana, 2006). I adopted a conversational and informal approach to the interviews. I found this method particularly useful with the Siyakhana group who were more than willing to talk and lead the discussions. They told me their stories about the garden and the project in their own words and recounted key events. All of the Siyakhana group interviews took place at the ECDCs. All the principals of the ECDCs (who are at the same time members of the Siyakhana group) were interviewed according to the in-depth interview schedule. The interviews lasted about an hour and a half and consisted of a range of questions concerning the Siyakhana group's involvement in the project. **(Refer to**

**appendix 1. Interview schedule).** All the interviews with the Siyakhana group took place in English.

Nine in-depth interviews took place with the gardeners of the Siyakhana food garden. These interviews took place in the canvas tent in the garden and six were conducted in English and three conducted in Zulu with a translation to English. For those interviews in which a translator was required the translator was one of the other gardeners from the Siyakhana food garden. These interviews lasted on average half an hour each. **(Refer to appendix 1. Interview schedule).** An additional four semi-structured interviews took place with the project manager, stakeholder engagement manager, programme manager and project director. The method of interview selected for these interviews was semi-structured and unrestricted. All these interviews took place at the offices of the Wits Public Health Unit. In total twenty one interviews took place for the purpose of this study. **(Refer to appendix 2. List of interviewees and dates).**

### **Data analysis**

The process of qualitative data analysis included three phases namely observation, collection and thematic content analysis. Data collected was interpreted according to a combination of themes derived from the findings of the customer satisfaction survey of the Bauta et al., 2008 study and findings of the project evaluation workshop reported on by Wills et al. (2009) and the larger themes of community development. These themes included the following: participation of the Siyakhana group in the initiative, the relationship between the Siyakhana group and the initiative and perceived and actual benefits of the Siyakhana group's involvement with the initiative. The qualitative data from in-depth interviews was transcribed and organised according to the broad themes of the research which include participation, empowerment and people centred development. All findings were interpreted according to the urban agriculture, poverty alleviation and food security and community development literature. Data collected from participant observation and informal conversation was also analysed using thematic content analysis. This study is based on a combination of both primary and secondary sources. The primary source of

information was obtained from the in-depth and semi-structured interviews, participant observation and informal conversations. The secondary sources of material consists of books, e-journal articles, academic magazines and the internet.

## **Ethics**

The purpose of the research was explained to the study participants verbally and through the use of the information sheet. This sheet was translated into Zulu and Sotho to ensure truly informed consent, as according to the project manager (Tashveer Bodhi), all the group members speak English but some better than others, with a couple having poor English literacy (**Refer to appendix 3. Participant information sheet**). The entire Siyakhana group made use of the English participant information sheets; however a few of the gardeners took the Zulu and Sotho information sheets. Individual informed consent to interview the Siyakhana group members and the gardeners was obtained at the time of interviewing (**Refer to appendix 4. Formal consent form**). The information sheet and consent form are separate from one another and all the study participants took a copy of the information sheet.

No tape recording of any of the interviews took place. Direct quotes which have been included in the study were written down at the time of interview/date of the participant observation. All the persons involved in this study were over the age of 18. The names of the members of the Siyakhana group have been placed under a pseudonym however all Early Childhood Development Centre (ECDC) names are original names. (**Refer to appendix 5. Individual consent to disclosure of ECDC**).

## Chapter 4: The Siyakhana initiative

### History of the Siyakhana food garden

The research took place in two locations: the “Siyakhana Permaculture Food Garden” (Siyakhana food garden) in Bezuidenhout Valley and at the Early Childhood Development Centres (ECDCs) of the Siyakhana group in the inner city of Johannesburg. **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs).** These ECDCs (and the children and the parents) are the primary recipients of the food produced from the urban food garden. On inception the food garden was established as an urban agriculture programme to address the needs of food insecure children, and people living with HIV/AIDS (PLWHA) (Wits HPU, 2008: 4). The initial objective of the food garden was to:

*“Establish a model permaculture food garden system for food production, education, research and empowerment of the community (particularly women) through training, employment and income generating opportunities” (Siyakhana, 2009).*

Over the past six years however the project has expanded to include a diversity of activities related to food security and ecological health in addition to the urban food garden. The food garden is however still the Siyakhana’s flagship project and it was the brain child of Professor Rudolph and the Wits Health Promotion Unit (HPU) six years ago.

In order to understand the developments which have taken place within the project over the last six years I have traced the links between the ECDCs and the food garden from the initiation and conceptual phase of the project to the current activities and operations. Whilst the literature highlights the fact that food gardens are dynamic and do not develop according to set stages three broad stages can be recognised within the life of the Siyakhana food garden (Dawson, 2008: 37). First the establishment of the urban food garden for the production of food. Second the consolidation, design and enhancement of the food garden and third the associated activities and long term sustainability (linking the food garden to a wider initiative of ecological health and food security).

In conjunction with the Community Oral Health Outreach Programme (COHOP) Wits HPU identified that the poor dental health of many inner city residents could be attributed to poor nutrition, and specifically low fruit and vegetable based diets (Chinemana, 2006: 10). Other research studies relating to oral health and HIV/AIDS also demonstrated that many People Living With HIV/AIDs (PLWHAs) in the inner city who were receiving Home Based Care (HBC) had a poor diet and inadequate nutrition (Wits HPU, 2008). At the outset of the project community linkages were established with sixteen representatives from Non-Governmental Organisation (NGOs) and Early Childhood Development Centres (ECDCs) (the Siyakhana group) from the inner city. The representatives of these groups were invited to join the food garden project on a voluntary basis on conditions agreed upon with the group and the other stakeholders (Professor Rudolph, December 20, 2010). The fundamental idea behind involving the Siyakhana group with the food garden was to make a positive impact on the inner city community, particularly given the food insecure nature of this group. Originally the primary benefit for the Siyakhana group was the receipt of organically grown produce from the food garden. The food received from the garden was shared with the beneficiaries and members of the ECDCs and NGOs.

The Siyakhana food garden was launched in 2005 in collaboration with multiple organisations: Food and Trees for Africa, Cape Gate, RB Hagart Trust, The Seagrit Foundation, and the Urban Greening Fund (Wits HPU, 2008).<sup>4</sup> In January 2005, a site was identified in Bezuidenhout Park by the Johannesburg City Parks Department and one hectare of land was allocated to the project. A working relationship was established with the Department of Social Development and Johannesburg City Parks (which falls under the auspices of the Joburg City Properties). This relationship helped ensure that the food garden

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<sup>4</sup> In addition to these original funders a large number of other external funders and organisations have contributed to the project. These include National Development Agency (NDA), Joburg City Environment, Joburg City Parks, Joburg City Properties, Joburg City Social Development, Gauteng Department of Agriculture, Conservation and Environment, Gauteng Department of Health, Gauteng Department of Labour, Gauteng Department of Education, Food and Trees For Africa, RB Hagart Trust, Cape Gate, The Seagrit Foundation and the Urban Greening Fund. The project sponsors for 2011 are: National Development Agency (NDA), BHP – Billiton Foundation, Massmart, Discovery Health, ABSA Foundation, The Woolworths Trust and AFGRI.

was developed in line with the Integrated Development Plan (IDP) of Johannesburg City (Wits HPU Food Garden Project, 2009: 5). The piece of land selected for the food garden was previously a dumping ground. However once the Siyakhana project took over the land it was transformed into land for planting through the technical support and advice of Food and Trees for Africa. When the Siyakhana project started there were no time full time employees and all contributions were voluntary based. Members of the Siyakhana group assisted with the labour involved in the preparation of the site and the initial planting of the vegetables and plants. However due to their full time commitments at their EDCs and NGOs these commitments were sporadic and did not take place on a weekly basis (as agreed upon) (Chinemana, 2006: 12). This was largely due to time and resource constraints of the Siyakhana group (Chinemana, 2006: 12). An initial budget of R38 000 was allocated for the start-up costs for the garden equipment. R24 000 was allocated for development of the nursery and R14 500 for the development of the orchard (Chinemana, 2006: 10). It took the project approximately seven months to establish the garden with the official launch taking place in September 2005. The former South African Minister of Health Dr. Manto Tshabalala-Msimang opened the garden in September 2005 (Dawson, 2008: 6).

In 2006 a critical milestone for the project was the signing of a five year lease between Wits University and Johannesburg City Properties (SIEHFS, 2010: 4). The five year lease period was essential to the sustainability of the project and provided the project with the opportunity for a medium term strategy and plan. The five year lease period also reduced the factors of risk on capital investment for the project, as food gardens do not develop overnight with the majority of the fruit trees in the garden taking five to seven years before they are able to yield fruit (Tshabalala, October 22, 2010). Furthermore the high establishment costs associated with food gardens means that financial yields are often not seen within the first three years of the project (Dawson, 2008: 27).

Over the years the growth of the garden has called for increased infrastructure – this began with very simple infrastructure such as a fence around the garden for security and a pond for rainfall harvesting to later an earth building for storage and accommodation. Many of



the Wits University departments, external consultants and volunteers contributed with both labour and technical expertise in these infrastructure projects, and also helped train new recruits to work in the garden. By 2008, approximately fifteen people from the inner city were employed by the food garden and a further twenty five were formally trained in permaculture and nutrition (Bauta et al., 2008: 13). The growth and increased development in the food garden has been accompanied by a parallel interest in using it as a site for research (both internally from Wits departments<sup>5</sup> and international Universities). Furthermore the food garden has had support from many government agencies including Gauteng Department of Agriculture, Conservation and Environment, City Parks, National Development Agency, Department of Labour and Department of Health. Other agencies which have helped the Siyakhana initiative to realise their vision is Food and Trees for Africa, BHP – Billiton Development Trust and NOPI (National Organic Produce Initiative) Life. Sarah Mashala (full time gardener) explains that the garden is well known even in the international arena and this makes her very proud. “We are helping the community around us and also helping ourselves through healthy living and practicing the principles of permaculture” (Mashala, December 07, 2010). “Siyakhana” which means “to build together” in isiXhosa is symbolic of this reciprocal relationship Sarah Mashala has described between the community (both those who work in the garden and those who do not) and the garden (Professor Rudolph, January 20, 2011).

Multiple research studies have been conducted on the Siyakhana food garden project which has enabled a two way flow of knowledge between the garden and gardeners and researchers and visitors. This has provided an invaluable source of learnings on the possibilities, benefits and constraints of urban food gardens as well as ideas for future innovation and implementation. The food garden has many practical examples of the practices of permaculture such as the cultivation of mushrooms and the establishment of

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<sup>5</sup> The following Wits departments have been involved with the Siyakhana initiative: Health Promotion Unit (HPU), School of Public Health (SPH), Faculty of Health Sciences, Division of Civil Engineering, Division of Architecture & Planning, Division of Geography & Environment, School of Animal, Plant & Environmental Sciences (APES), Graduate School of Public & Development Management (P&DM), Wits Business School (WBS), Centre for Entrepreneurship, School of Pharmacology, Community University Partnerships (CUPS), Wits Legal Office, Wits Commercial Enterprise (Pty) Ltd (Wits Enterprise) and Wits Health Consortium (WHC).

the pond. As Mandla Tshabalala (garden manager) says “we are also students and are learning along the way” (Tshabalala, May 10, 2011). These learnings are accompanied by project monitoring and evaluation to help assist in contributing towards the realisation of the projects aims and objectives (SIEHFS, 2009: 5).

Applied research projects have taken place on the following aspects: urban food security, soil fertility and chemical analysis, agriculture equipment design, development of an eco-cooling system for produce, design and building of structures from natural materials and medicinal uses of herbs and plants (Wills et al., 2009: 3). The published research works provide reflections of where the garden was at that time and provide useful information pertinent to key stages in the development of the garden. In 2006 the first research study was performed by Frances Chinemana from London South Bank University. Chinemana (2006) conducted an evaluation of the garden, which consisted of key interviews with the Siyakhana group and other stakeholders. The evaluation took place as part of a capacity building collaboration between London South Bank University and University of Witwatersrand funded by the British Council (Willis et al., 2009: 8).

The main objectives of the research were to explore the notions of community development, empowerment and capacity building (Chinemana, 2006: 4). The focus of the evaluation was predominantly on qualitative issues associated with the origin and subsequent implementation of the project (Chinemana, 2006: 4). A key finding was that although the Siyakhana group saw real benefits associated with their involvement in the project; due to their commitments to their own ECDCs and NGOs, they were unable to provide sufficient support (in the form of labour) to ensure the development of the garden (Chinemana, 2006). Chinemana stated that due to the garden being initiated by Wits HPU it was not a community based project that grew out of the identified needs of the community (Chinemana, 2006). For this reason Chinemana found that a fundamental problem with the project was that it had no leadership from within (Chinemana, 2006). The findings of this research reiterate these initial findings of Chinemana however provide insight into the complexity of the Siyakhana group and their interaction with the initiative.

A team of researchers from New York University examined the effect of participation on the gardeners and their families through their involvement with the project (Bauta et al., 2008: 31). In the evaluation in which the team looked at the impact of “Urban Food Gardens on the Health of Communities” the conclusion was that in general the gardeners have benefited from their participation in the project in several ways. The most important benefit (in the minds of the gardeners) according to this research was the new found knowledge of proper nutrition and eating habits, as well as new skills in tending to the garden. Patrick Khanye (full time gardener) says that “through the project I have been able to continue to learn and learn about better practices all the time” (Khanye, December 07, 2010).

Dumisani Madumo (full time gardener) also reports that one of the major benefits for him in working in the garden is the amount of knowledge that he has gained (Madumo, December 07, 2010). The Siyakhana project demonstrates a huge commitment towards education and training of both the inner city community and their staff, with all the gardeners receiving on the job training and organised training initiatives. Four of the Siyakhana staff have been on a nursery management course and the garden manager travelled to Germany where he attended an eco-village design course. The type of knowledge that has been gained by the gardeners from their involvement with the project relates to principles of permaculture. All of the gardeners interviewed felt that the garden is testament to the skills they have learnt over the months/years that they have been involved with the project. The garden has developed and complex design elements as well as increased diversity, quality and quantity of produce on an incremental year-on-year basis. As we understood from Mandla Tshabalala earlier in the text, the food garden is an interactive environment in which on-going learning can take place.

A major finding however by Bauta et al. was the inability of the garden to provide food to the members of the Siyakhana group (and thus avoid all instances of food insecurity) (Bauta et al., 2008: 32). In this criticism Bauta et al. study looked at the inability of the garden to provide produce based on the relatively small quantity that the garden was producing during 2008 (Bauta et al., 2008). A similar criticism was raised by Dawson who performed an

evaluation of the food garden and its suitability as a model for urban agriculture (Dawson, 2008). The garden was evaluated against key criteria that arose in the literature in terms of the sustainability of an urban agriculture project and against its own objectives (Dawson, 2008: 5). The results of this study indicated that urban food gardens are by no means **the** solution to food insecurity or rising food prices but rather “a means to supplement cash income to improve food security” (Dawson, 2008: 38). This is supported by the incidence of urban agriculture in South Africa which is largely subsistence based and is not orientated for the market and based on a profit motive.

This is however contrasted against parts of the world such as Asia where urban agriculture is an important component of the domestic economy (Greenberg, 2006: 10). Whilst the food produced from the garden is still only enough to supplement the meals for the children at the EDCs, the research shows that there is a much greater diversity and quantity of produce which is being shared with more people than at the beginning of the project. This of course has been accompanied by more complex activities and functions which also contribute towards the sustainability of the garden. Sarah Mashala (full time gardener) reports that “the garden is growing up, however we are still small” (Mashala, December 07, 2010). As part of this “growing up” the food garden is just one piece of a much larger puzzle. The bigger picture is the Siyakhana initiative for ecological health and food security (Siyakhana initiative).

### **An introduction to the Siyakhana initiative**

The primary objective of the Siyakhana initiative is to facilitate the health promotion in urban and peri-urban areas in Gauteng (SIEHFS, 2009: 4). The approach adopted is one which provides an “ecological health perspective on health promotion” (SIEHFS, 2009: 4). The food garden which acts as the demonstration site of the initiative provides a model of urban agro-ecology. Urban agro-ecology is a form of organic farming which has emerged as a result of its environmental friendliness and interconnectedness to other fields of study: economic, social, environmental, political and spiritual (Bengnwi, 2009: 25). Ecological

health promotion is based on this same interconnectedness of natural, cultural and social settings and how these together have a major impact on public health (SIEHFS, 2009: 4). Both approaches are demonstrations of the multiple and complex ways in which different components of a system interact with one another in an integrated manner (Bengnwi, 2009: 12).

The Siyakhana initiative is a syndicate under the governance of Wits Health Consortium (Pty) Ltd. The Consortium is a wholly owned subsidiary of the University of the Witwatersrand, Johannesburg under its Faculty of Health Sciences (Wits Health Consortium, 2011). WHC provides Faculties with a legal framework within which to operate the research and other activities necessary to support their academic objectives. In addition to the legal framework, WHC offers a range of products and services in the management of the academic activities. WHC is a Non-Profit Organisation (NPO) with all surpluses being reinvested into either WHC's or the University's operational and academic infrastructures. The benefits which this structure offers particularly with regards to the financial and administrative support is one of the main reasons why the initiative decided to be involved with the WHC (Professor Rudolph, January 20, 2011). According to Professor Rudolph (project director of the Siyakhana initiative) under this new arrangement, the initiative has the ability to be more “flexible and effective and produce a much greater impact” (Rudolph, January 20, 2011).

Over time (to date the project has been running for six years) the initial objectives and goals of the food garden have expanded substantially. In the beginning of the project, the primary objective was on the food garden and the production of food from the garden. This however has grown considerably and whilst the production of healthy and organic food is still one of the major focus areas, the site is also used as a “living laboratory”. As a “living laboratory” the garden provides the setting for multiple trainings and the sharing of knowledge to a much wider range of stakeholders than the primary beneficiaries of the project (the gardeners and the Siyakhana group). With the rapid growth of the food garden, the project has spent a lot of time consolidating and enhancing the activities of the food garden. To achieve this Wits HPU and the gardeners have worked against a clear plan in which there is

a shared vision of the intended impact of the initiative. As well as looking at the impact of the initiative, the plan has formalised the activities and programmes associated with the initiative taking into consideration strategies for economic sustainability, outputs and outcomes to be achieved and the roles and responsibilities of all those involved in the initiative. The food garden is currently sponsored and supported by a number of organisations including: Discovery Health, The Woolworths Trust, ABSA Foundation, National Development Agency (NDA), BHP-Billiton Foundation and Massmart, AFRGRI, Health Empowerment Through Nutrition, Pretoria Portland, ApexHi Properties Limited (facilitated through Tshikululu Social Investments), Builders Warehouse and Ukhuni Business Furniture (SIEHFS, 2011: 16). Professor Rudolph (project director) emphasises that it [the garden] is “no longer just a garden” (Rudolph, January 20, 2011).

As you walk through the food garden today it is thriving and flourishing with different sections of complementary mixed-use beds covering one hectare of land in the Joburg City Parks. The garden shows great resourcefulness in its use of car tyres to form the walls for compost heaps. There is a section for compost development, a pond for rain water harvesting, a fruit orchard, various types of vegetables, medicinal plants and herbs and mushroom cultivation (Bengnwi, 2009: 12)<sup>6</sup>. The pond is not only used for rain water harvesting but has been specifically designed for the practice of aquaculture. In addition to the permaculture aspects of the garden ecologically friendly infrastructure has been built. This includes a solar powered cooking dish, solar panels, natural building storage and warehousing (such as the small greenhouse which has been made out of broomstick poles and clear plastic sheeting), ecological ablutions, training centre and nursery. There are also plans for the future to make use of proper irrigation using renewable energy.

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<sup>6</sup> Bengnwi, 2009 explored the practice of urban agro-ecology in terms of its benefits, constraints and possible solution to the challenges facing urban livelihood in the city of Johannesburg. The Siyakhana food garden was used as a case study to demonstrate how urban agro-ecology could be used as a tool to mitigate the livelihood challenges of poverty, unemployment and disease faced by the Johannesburg metropolis (Bengnwi, 2009: 6).

**Figure 2. Earth building – field office and green house made from broomsticks**



The balanced nature of the garden truly lives up to the concept of ecological health promotion, according to Mandla Tshabalala (garden manager) “the air you breathe in here is different it has its own healing properties”, “It’s like heaven on earth” (Tshabalala, May 10, 2011). Mandla Tshabalala is truly proud of everything that has been achieved at the food garden, explaining that “it is a blessing to be part of it, it is one of the trophies in life” (Tshabalala, May 10, 2011). The food garden provides a sustainable and productive environment which according to the initiative is necessary for the improvement of the health, social and economic status of South African inner city communities (SIEHFS, 2010: 2). There are four main ways that the food garden is able to do this. The first is through improving availability and accessibility of nutritious food, second networking, conscientisation and mobilisation, third research and education and finally by ensuring economic sustainability. In the discussion below I will further investigate each focus area and look at the achievements and challenges of the Siyakhana initiative

### **Improving availability and accessibility of nutritious food**

Six years later the numbers of people who know about the Siyakhana initiative is testament to the huge contribution it has made in the promotion of ecological health. The initiative has expanded and reached so many more people than just the primary beneficiaries of the initiative, the Siyakhana group and the gardeners. The garden produce is shared through the primary beneficiaries with the larger inner city community and on a small scale the garden also sells herb salts and plants from the nursery to visitors. As visitors walk through the

garden networking conscientisation and mobilisation takes place with immense knowledge being shared by the gardeners on the principles of permaculture and ecological health promotion. During a guided tour through the food garden Mandla Tshabalala showed me many medicinal herbs, explaining for each herb what ailments it can be used to cure. The awareness which is created by the food garden promotes social change and enables individuals to make informed decisions about a healthy lifestyle and food. Through the interaction with the food garden, people are able to “increase control over and improve their health” (SIEHFS, 2009: 4).

### **Networking, conscientisation and mobilisation**

In addition to the knowledge which is shared amongst the visitors through interactive walks in the food garden, the initiative has also had numerous formal trainings. The formal trainings shared with the wider community include the theory of permaculture accompanied by practical training in the food garden. Of the people who have passed through these trainings are twelve members of the Siyakhana group, five trainees from the Twilight youth shelter in Hillbrow, five unemployed youth from the Hillbrow hospital, twenty five senior adult trainees from Rainbow Nation Farmers’ Association in Eldorado Park and trainees from the Department of Agriculture. Other formal trainings on the broader subject of ecological health promotion have also taken place with the Siyakhana initiative educating over forty trainees from Wits University and Siyakhana on medicinal herbs and plants and cultivation of gourmet mushrooms. Entrepreneurship and agribusiness management has also been offered to four of the Siyakhana staff and fourteen members of agricultural communities in the Johannesburg area. By using the food garden as a practical training site it enables an inter- and multi-disciplinary learning approach to take place. It is in this way that the food garden is increasingly becoming a “living laboratory” and a “field lab” in which learning from a variety of sources takes place. Furthermore the initiative is flexible and responds to the changing needs of the community by continuously adapting and tweaking training courses. In 2011 the courses offered are staggered depending on the level of knowledge of the participant. There are beginner courses such as the “introduction to permaculture”, “the promotion of nutrition and healthy living” and “mushroom growing” to



more advanced courses which include “small space gardening” and “advanced permaculture”.

### **Research and education**

In line with the third objective of the initiative (research and education), the initiative has launched the Siyakhana schools programme. The Siyakhana schools programme was launched in April 2011 in six schools in the Yeoville area (inner city Johannesburg). The programme is free of charge to the schools and the schools chosen were based on the proximity to the Siyakhana food garden and the income of the school (low income schools have been targeted). The aim of this programme is:

*“To increase health, food security and diversity as well as learning opportunities among young learners at schools, the staff and parents in the inner city Johannesburg” (SIEHFS, 2010: 2).*

To do this Siyakhana’s main objective is to increase the availability of environmental and nutritious education to those schools (such as those in the inner city) that would normally not have the opportunity to be exposed to such education. The training takes place over a period of a year in which once a week, two permaculture specialists and the gardeners visit the schools and assist them in establishing a sustainable food garden for their respective schools. This type of training is particularly for Johannesburg schools, as evidence shows that Gauteng has largely lagged behind the Western Cape in terms of school initiated food gardens (Hartshorne, 2011: 10).

All of the teachers of these schools have also been exposed to the Siyakhana food garden and the basic principles of permaculture were explained in the Siyakhana food garden prior to the specialists assisting in the start-up of the garden. The training is conducted in conjunction with SEED (Schools Environmental Education and Development) (transforming learning through permaculture). SEED which has grown out of the Cape Flats Primary School environment is now rolling out a national programme of training courses which will be

facilitated in the Siyakhana food garden (SEED, 2010). SEED has been in operation for nine years and has delivered a diverse range of outcomes, from developing curriculum for environmental education and green entrepreneurship, to the growing of robust outdoor classrooms in under-resourced schools across the country (SEED, 2010). One such success story is the Sefikeng Primary School in the Leeuwkop Prison grounds which has a flourishing garden that assists in feeding 200 children with lunchtime meals (Hartshorne, 2011: 10). SEED provided training in 2009 to the school, assisting in setting up an outdoor classroom for the natural science subjects and continues to support the school with the donation of seeds.

The school programme which will be performed in conjunction with the Siyakhana initiative specifically covers curriculum integration. Curriculum integration is an approach to teaching and learning that is based on both philosophy and practicality (Alberta Education, 2007: 2). It draws together knowledge, skills, attitudes and values from within and across subject areas, using practical examples to develop a more powerful understanding of key ideas. The governance and maintenance of the school programme is managed by SEED and the Siyakhana food gardeners were involved in the initial design of the training programme.

Whilst this is the first formalised programme offered to schools by the Siyakhana initiative (with a particular focus on primary schools), it is evident that since the beginning of the project through the links established with the ECDCs, that the food garden has already been providing this type of training and education. All of the ECDCs involved with the initiative have taken the children to the garden and learnt about strategies to establish and sustain food gardens within their communities. The new training however takes this one step further, offering community and site assessments in order to recommend suitable strategies to:

*“Promote food gardens, greater food security, engender a culture of entrepreneurship, and ensure the long-term sustainability of each initiative” (SIEFS, 2010: 2).*

In addition to the training which is offered by the initiative, Moira Berry (Siyakhana programme manager) and Florian Kroll (Siyakhana programme head) are consultants working in the area of research and education. All consulting activities are related to the implementation of sustainable ecological health and food security strategies. At the time of research they were working on four consultancy projects:

1. A nutrition study in Alexander (scheduled for completion February 2011);
2. GAPP Mamelodi project;
3. Health Empowerment through Nutrition (HETN); and
4. ApexHi Properties Limited.

The Siyakhana consultancy services are uniquely positioned as the food garden has in essence acted as the “marketing tool” enabling the good work which has been done in the garden to be shared and sold in the market. Exact projections of the income expected to be received from these consulting assignments could not be established at the time of research. According to Moira Berry, through her consulting and research work, she is able to take the theories of ecological health (upon which the food garden was built) and put them into practice in a larger scale real-world context (Berry, January 16, 2011). In their work with the GAPP Mamelodi project, the Siyakhana consultants are contributing towards the urban agriculture and sustainability elements of the strategy. This project is a national programme for the City of Tshwane. There are ten parts to this project, of which the Siyakhana consultants are involved in one part - the Tsosoloso Mamelodi Regeneration Strategy (Professor Rudolph, January 20, 2011). This strategy was developed to reduce infrastructural inequities in South African townships (Southern Africa Food Lab, 2011: 2). Whilst the project is still in its design stage, ideas for urban agriculture are largely related to the formalisation of the activity to ensure that the regeneration programme has a livelihoods and sustainable development component. The idea is to encourage the formalisation of urban agriculture and urban forestry in conjunction with support facilities including resource centres, packing houses, nurseries and people’s markets. The main priority of the Siyakhana consultants is to

develop allotments that could be used by individuals to firstly provide food for the growers' households, and secondly provide food for sale in smaller and more informal markets (Berry, January 21, 2011).

### **Economic sustainability**

From the diversity of activities that are taking place as part of the Siyakhana initiative one can see that there is so much more to the initiative than only the urban food garden. It is a carefully planned and highly developed ecological health initiative. According to Professor Rudolph (project director) the project has reached the threshold where sustained investments are required to ensure long term viability (SIEHFS, 2009: 1). Evidence from the literature demonstrates that many urban food gardens fail due to a lack of sustainable financial and material resources (Bengnwi, 2009: 79). Both of these statements point to the fact that at this stage in the project the additional income generating streams are insufficient to close the gap and enable a sustainable financial model.

Past research on the Siyakhana food garden criticised the financial model and sustainability thereof of the food garden project based on its inability to generate a surplus of income on a monthly basis (Sachs, 2010; Bengnwi, 2009; Bauta et al., 2008; Dawson 2008; Chinemana, 2006). This research further investigates the efforts which have been made by the initiative in the past year to generate surplus income on a monthly basis. There is a diversification of income with multitude of income generating streams. The food garden and produce which is distributed to the Siyakhana group (free of charge) is currently only one part of the much larger initiative. At present the primary income streams for the initiative are: the sale of seeds, seedlings, medicinal creams, herb and vegetable salts (on a small scale basis), consulting, research and training (Professor Rudolph, December 20, 2010).

According to Tashveer Bodhi (project manager) the food garden is much less financially dependent on external funds compared to 2008 in which the garden was seventy five percent dependent on external funds. Hlangi Vundla (stakeholder engagement manager) was employed to assist with fundraising for the initiative and strengthen the relationship

with the Siyakhana group. Hlangi Vundla spends a large amount of time meeting with prospective funders, presenting to them the case study of the Siyakhana initiative and taking them on tours of the food garden. For the financial year 2011 the garden has secured funding from ABSA Foundation and The Woolworths Trust of which R429 800 is allocated to the salaries of the gardeners and Personal Protective Equipment (PPE), R86 000 for distribution costs of the food to the beneficiaries, R105 000 for infrastructure, R180 000 for 5 x three day training courses, R105 000 for 2 x five day training courses and a final amount of R200 000 for the administrative fees. The split in the funding contribution is interesting as it is a good indication of the priorities of the initiative. Notably the funding allocated to the distribution of the food to the beneficiaries is nearly equivalent to that of the infrastructure costs. This demonstrates the commitment of the Siyakhana initiative towards ensuring that the beneficiaries of the food garden actually receive the food so that it can make a difference not only at their ECDCs but also within their immediate communities and families.

As the initiative has “grown up” and received more sustainable forms of funding, the initiative has been able to employ resources specifically for financial analysis and project management. Tashveer Bodhi (project manager) manages the accounts, prepares detailed budget requirements, business plans and cash flow analysis on a monthly basis for the initiative as well as performing his project management duties and administering all training courses. The wider financial governance arrangements of the Wits HPU have assisted in establishing the financial management procedures for the initiative. Tashveer Bodhi has financial records of the project since 2009 (before 2009 there was no resource allocated to these activities). The improved financial governance and security of the project however has not been achieved without a struggle.

According to Moira Berry (programme manager) one of the major obstacles to obtaining funding for the initiative is that “it is no longer a new project” and multiple parties and organisations have been involved with the initiative over the past five years (Berry, December 08, 2010). According to Moira Berry the large amount of media coverage on the

Siyakhana initiative over the past five years has resulted in perceptions that multiple partnerships are still in place and that the need for funding is minimal. Moira Berry explains that there is reluctance amongst potential funding organisations to embark on a joint venture campaign if there are other funding parties involved. Another problem which the initiative encounters in terms of the sustainability of the funding is that funding organisations rarely commit for a period of more than a year. The Siyakhana initiative has been well covered in the media over the past six years. In the last quarter of 2010 the Siyakhana initiative was featured on TEDx Johannesburg. (Refer to <http://www.youtube.com/watch?v=yf56xKEL72Q&playnext=1&list=PL77EE3D9BBB1E7A8> 1).

During the TEDx talk Mandla Tshabala (garden manager) gave the history and background of his life in relation to the work that he does at the Siyakhana initiative. Since the TEDx talk Mandla Tshabalala has also done numerous other talks on urban food gardens, permaculture and ecological health promotion including the Maharishi Institute and the Gaa FM community radio station. The Siyakhana food garden is also featured on “You Tube”. (Refer to <http://www.youtube.com/watch?v=z7w4sUHU1IQ>). Other videos on the Siyakhana food garden include: Siyakhana permaculture garden on Afagri TV; Growing food at Siyakhana; The Siyakhana food garden on Lunch Box; Siyakhana and soil on “Grow Your Own”; Nutrition, Health and Food Security Research – South Africa. These communications extend beyond the South African context, people from around the world are aware of the Siyakhana initiative and its vision. A clear case in point is that two of the research studies on the Siyakhana project were done by international students. According to SIEHFS:

*“From 2009-2010 we hosted hundreds of local and **international** visitors at the garden. Students, professionals, government representatives and tourists have come to Siyakhana in great numbers eager to see our urban agriculture model in action” (SIEHFS, 2010: 6).*

In the past, attempts were made to link the garden with existing organic markets in Johannesburg. Food from the garden was collected by a representative (who owns a stall at The Wholefood Market Johannesburg (Blu Bird shopping centre)) at 06h00 on a Sunday morning. However according to Professor Rudolph the selling of the produce was “not sustainable” (Professor Rudolph, December 20, 2011). This venture was unsustainable due to the logistics of organising the collections on a Sunday (not a working day for the gardeners). However we should not fail to recognise that despite the food garden’s dependency on external funding, that there are an increasing number of streams contributing towards self-funding. The initiative has a clear plan and direction of where it is moving, with the activities for the future having been quantified, coupled with the revenue that will be made from the consulting and the training.

Whilst the income generating streams are a significant step towards long term sustainability the Siyakhana initiative is still primarily a sponsored community project. For future sustainability the initiative could consider looking towards a social entrepreneurship model in which the gardeners are up-skilled to become the project drivers and owners. Social entrepreneurship is a process which catalyses social change and/or addresses important social needs in a way that is not dominated by direct financial benefits for the entrepreneurs (Mair et al., 2004: 1). The social entrepreneur is an individual who has innovative solutions to society’s most pressing social problems. There is a possible potential for not only a social entrepreneurship model but also a social franchise model. Within this social franchise model I envisage that the gardeners would take charge in replicating and/or rolling out other such projects at sites such as schools, clinics and parks, beginning in Johannesburg and possibly later within other sites around the country. This roll-out is envisaged by the Siyakhana initiative, however it is a long term plan and there is no specificity of who will be responsible for the actual implementation (SIEHFS, 2009: 1). According to Tashveer Bodhi whilst commercialisation of the initiative is in the pipeline, it is “far ahead” (Bodhi, December 23, 2010). It should be recognised however that the stepping stones for such a business model are slowly being put in place. All of the gardeners have the necessary basic permaculture skills for establishing food gardens. This now needs to be accompanied by increased focus

on business skills training so that the gardeners can be active participants in structuring a business relationship in which the royalties of sales and a type of incentive scheme/functional microfinance system can be developed to supplement the salaries and make their involvement with the initiative a viable business proposition (Bengnwi, 2009: 79). A pre-requisite for the success of a social enterprise/social franchise model is a formal channel to the market.

This chapter has provided a history of the Siyakhana initiative highlighting the numerous achievements of the food garden and larger initiative over the past six years. These achievements can be broadly grouped as follows:

1. Improved accessibility of nutritious food to the Siyakhana community;
2. Networking conscientisation and mobilisation;
3. Research and education; and
4. Financial sustainability.

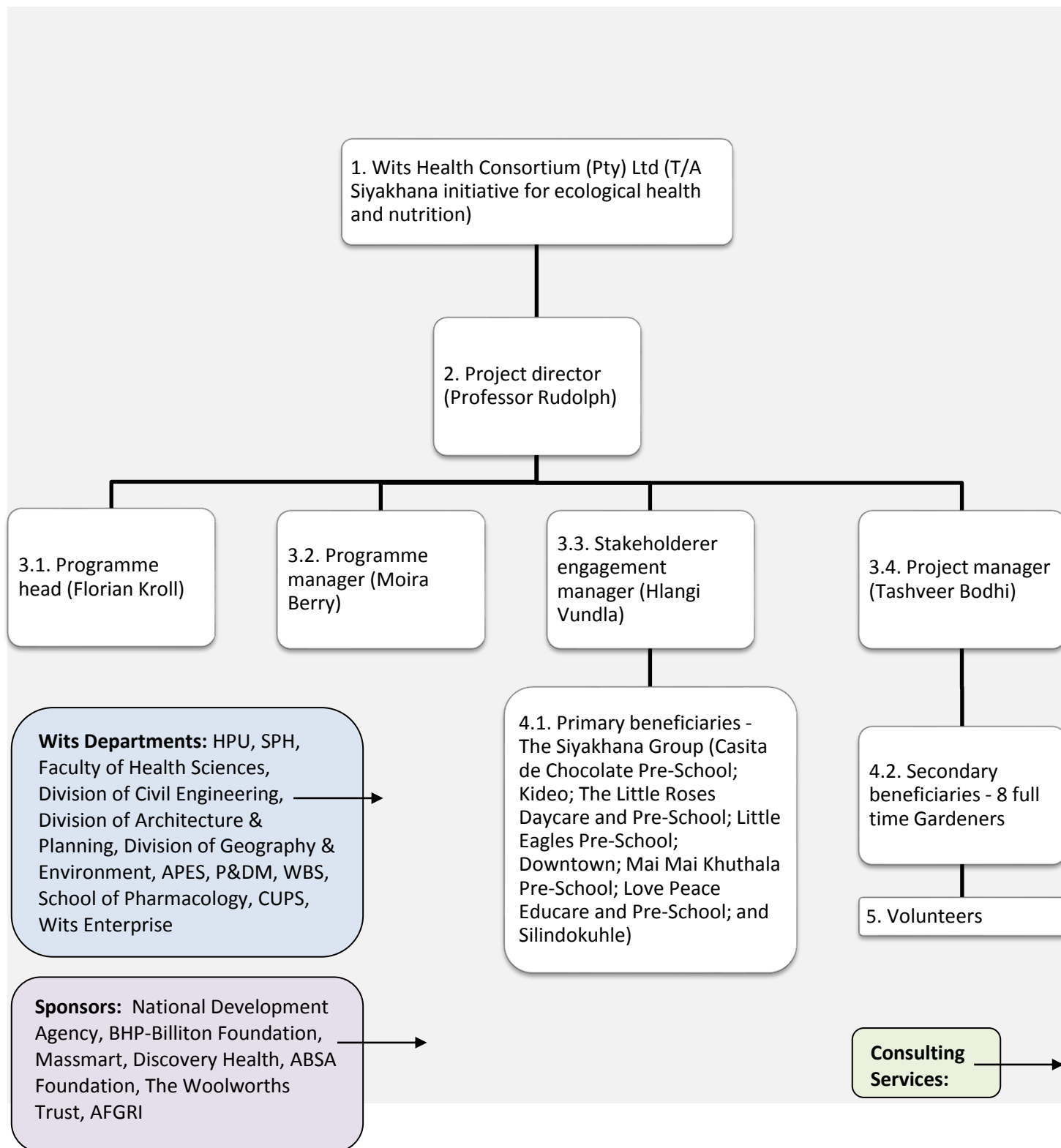
We have understood the current stage of the garden and how this is focused on consolidation and enhancement and the strengthening of relationships with the beneficiaries of the project. By tracing the history of the project I have highlighted that this is not just one small food garden but rather a multiplicity of ecological health strengthening activities all based on a long term vision of a self-sustainable initiative. We have seen how amongst other things the food garden has created jobs within the community thus contributing towards economic development, enabling skills transfer between a wide range of beneficiaries and addressed the needs of food insecure groups and their respective wider communities. A detailed explanation of the complex structure of the Siyakhana initiative has been provided so that one can understand the various players of the Siyakhana community. Finally the achievements of the initiative provide the back drop against which community development and the links thereof to urban food gardens were examined. In the next section I provide an ethnographic account of the Siyakhana group describing their day to day activities and their ECDC facilities.



## **Chapter 5: Siyakhana role players**

This chapter provides an explanation of the complex organisational structure of the Siyakhana initiative by providing detailed descriptions of all the key role players. In providing these descriptions the chapter looks at the roles and responsibilities of the various players and how they interact and connect with one another. For ease of reference the Siyakhana organisational structure was split into “Siyakhana staff” and “Siyakhana beneficiaries”. As part of the understanding of the Siyakhana beneficiaries a further section is included which looks in detail at the relationship between the Siyakhana group and the initiative. I highlight the problematic nature of this relationship and how there have been issues of communication and transparency between the Siyakhana group and the initiative in the past. The historical relationship is particularly important to understanding the Siyakhana group as characteristics and outcomes of partnerships depend on a number of factors and are largely based on prior relationships and motivations (McNall et al., 2008: 320). The section also emphasises however that all projects are faced with challenges and it is the way in which the initiative responds to the challenge that matters. Both the Siyakhana initiative and the Siyakhana group are making efforts to strengthen and foster the relationship. The Siyakhana group have re-defined their expectations and the Siyakhana initiative has undergone a process of re-thinking and reflection of the issues and problems with new assumptions.

**Figure 3. Siyakhana initiative organisational structure**



## **Siyakhana staff members**

The Siyakhana initiative has a particularly complex organisational structure. As described earlier in the research the initiative falls under the management of the Wits Health Consortium (Pty) Ltd. **(Refer to “1” on figure 3. Siyakhana initiative organisational structure)**. WHC provides the legal framework under which the research and other academic objectives of the initiative can be achieved. WHC is a not-for-profit organisation with all surpluses being reinvested into either WHC's or the University's operational and academic infrastructures. Heading up the Siyakhana initiative is Professor Rudolph (project director). **(Refer to “2” on figure 3. Siyakhana initiative organisational structure)**. Professor Rudolph is responsible for the overall initiative and for reporting and feedback to the Wits Health Consortium. The food garden which is Siyakhana's flagship project was the brain child of Professor Rudolph and the Wits Health Promotion Unit (HPU) over six years ago. With the extensive growth of the initiative over the past six years, there is a well-established office support structure. **(Refer to “3” on figure 3. Siyakhana initiative organisational structure)**. By referring to “office support structure” this is not to give the impression that these are office bound positions. Rather all of these positions are interactive and involved in the field. This line of the organisational structure consists of Florian Kroll (programme head), Moira Berry (programme manager), Hlangi Vundla (stakeholder engagement manager) and Tashveer Bodhi (project manager).

Florian Kroll (programme head) and Moira Berry (programme manager) are primarily involved with the research and consulting activities of the initiative. Hlangi Vundla (stakeholder engagement manager) was appointed in June 2010 by the Siyakhana initiative to manage the distribution of the food and to conduct outreach to schools and institutions nearby to Siyakhana, and manages relationships with garden staff and the Siyakhana group (SIEHFS, 2011: 11). The distribution of the food to the beneficiaries is one of the most important activities related to the food garden. During 2009 and 2010 there were problems with the distribution and it seems as if the garden grew too big too quickly with this element of distribution being neglected. The point however is that all initiatives/projects will have their individual and unique challenges but the important issue in considering the

sustainability of the initiative/project is the way or ways in which they respond to these challenges. The Siyakhana initiative is an excellent example of a responsive and self-reflexive initiative. It was recognised that there was a problem with the distribution of the produce and rather than ignoring it and pretending as if everything was fine (as is the trend with many initiatives/projects) a solution was found in which to deal with the issues.

Hlangi Vundla oversees the delivery of the produce to the beneficiaries (Siyakhana group) and fosters and strengthens the relationships between the various stakeholders involved in the initiative. From the previous research which has been done on the food garden, the relationship between the Siyakhana group and the project has not always been an easy one. In the second year of the project seven members of the Siyakhana group dropped out of the project for various reasons including lack of funding, unhappiness with the management of the project and in-fighting (Willis et al., 2009: 3). Previous research cites multiple points of conflict and reasons for the tension thereof. Bauta et al., (2008) highlighted dissatisfaction of the Siyakhana group with the access to information - particularly the use of funds, poor communication from the project leaders and lack of participation in decision making processes surrounding the food garden. In the most recent study on the food garden and initiative Sachs reports that there is a recurring theme of “conflict between the various members” of the initiative including the gardeners, Siyakhana Group and Wits University (Sachs, 2010: 50). However these conflicts have been recognised by the Siyakhana initiative and the appointment of Hlangi Vundla is one of the ways in which the initiative is trying to resolve the conflicts which exist.

The appointment of Hlangi Vundla has solved logistics issues relating to distributing the food to the beneficiaries. Hlangi Vundla is not only a means to solving the issue of the distribution of the food to the beneficiaries but a huge value-add for the initiative. Hlangi Vundla has a degree in agriculture and his interest in nature, planting and harvesting and sharing what he knows, is far from academic - it is true passion. Hlangi Vundla says “I am a lover of nature. Growing things, understanding the reason things happen in nature, why the wind blows in

August in Johannesburg, why the rains come in summer, how all is explained by nature and the seasons, is enthralling for me” (TasteMag, 2011).

### Siyakhana sponsors

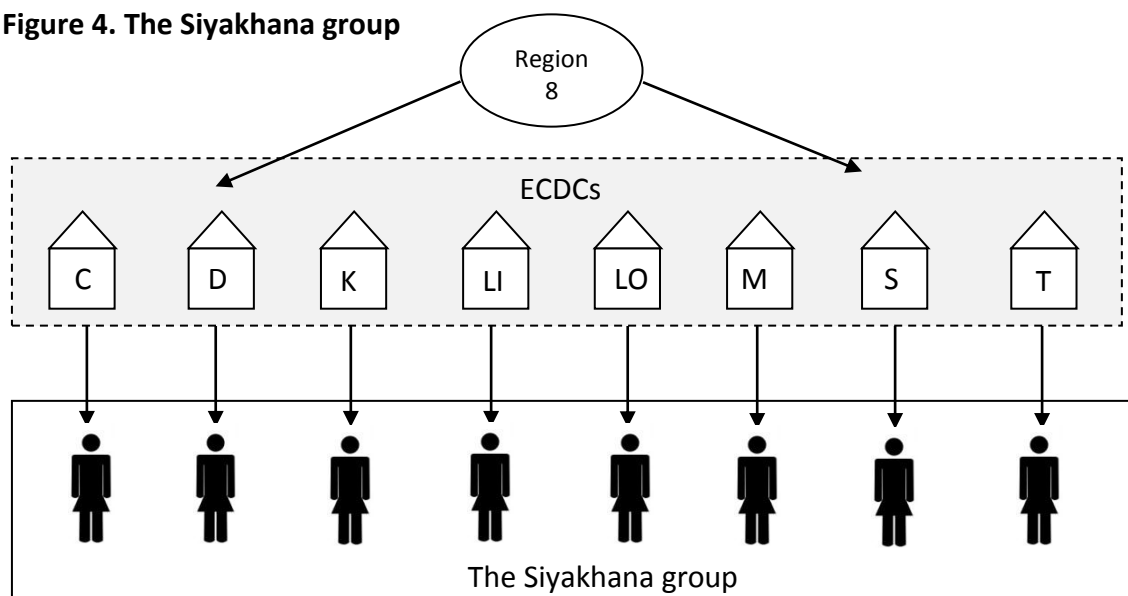
The food garden is currently sponsored and supported by a number of organisations however **figure 3. Siyakhana organisational structure** only shows the major sponsors (based on contribution). These include Discovery Health, The Woolworths Trust, ABSA Foundation, National Development Agency (NDA), BHP-Billiton Foundation, Massmart and AFGRI. Other organisations which have contributed to the Siyakhana vision through funding and sponsorship include: Health Empowerment Through Nutrition, Pretoria Portland, ApexHi Properties Limited (facilitated through Tshikululu Social Investments), Builders Warehouse and Ukhuni Business Furniture (SIEHFS, 2011: 16).

### Beneficiaries of the Siyakhana initiative

The Siyakhana initiative has two groups of beneficiaries, the Siyakhana group and the gardeners. The Siyakhana group is the primary beneficiary of the initiative and the focus of this research. **(Refer to “4” on figure 2. Siyakhana initiative organisational structure)**. In exploring the links between community development and urban food gardens the beneficiaries of focus for this research are the Siyakhana group.

### Primary beneficiary: The Siyakhana group

Figure 4. The Siyakhana group



## Key

- C - Casita de Chocolate Pre-School;
- D – Downtown;
- K – Kideo;
- LI - Little Eagles Daycare and Pre-School;
- LO - Love Peace Educare and Pre-School;
- M - Mai Mai Khuthala Pre-School;
- S – Silindokuhle; and
- T - The Little Roses Daycare and Pre-School.

The Siyakhana group have been involved with the Siyakhana initiative since the beginning of the project. All members were principals of their respective ECDCs prior to their involvement with the Siyakhana food garden project. During the conceptual stage of the project Wits Health Promotion Unit (HPU) contacted Non-Governmental Organisations (NGOs) and Early Childhood Development Centres (ECDCs) (who are referred to as the Siyakhana group) involved in the Region 8 Forum to establish their interest in being involved with the urban food garden project. The primary objective of involving the NGOs and ECDCs in the project was to improve their beneficiaries and pupils nutritional status. To do this the Siyakhana food garden would provide vegetables, fruits and herbs to the NGOS and ECDCs for them to use in the feeding of the beneficiaries and pupils. There was buy-in from all of the NGOs and ECDCs that were approached and at the start of the project there were sixteen representatives from NGOs and ECDCs. Currently half of the original Siyakhana group are involved with the initiative. All of these eight members are ECDCs; there are no longer any NGOs in the Siyakhana group.<sup>7</sup> The ECDCs which form the existing Siyakhana group are: Casita de Chocolate Pre-School, Downtown, Kideo, Little Eagles Daycare and Pre-School, Love Peace Educare and Pre-School, Mai Mai Khuthala Pre-School, Silindokuhle, and The Little Roses Daycare and Pre-School.

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<sup>7</sup> The last NGO which was involved with the initiative was Siyophila Home Based Care. The reason for the drop out of this NGO was as a result of the passing away of the principal in 2009. A member of the Siyakhana group said that the group was waiting for the NGO to nominate a new representative for the NGO to re-engage with the Siyakhana initiative.

The Siyakhana group has had close ties with one another for over ten years, with all members knowing one another from the ECDC forum prior to their involvement with the Siyakhana initiative. Siyakhana group member three recalls her involvement in the Siyakhana project when the food garden was still only an idea “the meeting took place at the Sabelo office and if you were interested in being involved in the project, you put your name down. At this stage the garden was only an idea, in infancy stage” (Siyakhana group member three, December 02, 2010). The entire Siyakhana group realised the potential of a food garden and the possibilities of their involvement which related to nutrition, organic food and healthy living. Siyakhana group member six recalls that she got involved with the food garden for the “possibility for increased food to my ECDC” (Siyakhana group member six, December 08, 2010). Similarly Siyakhana group member seven says that she wanted to be involved with the food garden “due to sickness and HIV, and for the possibility that the children could eat that which has come from the soil” (Siyakhana group member seven, January 19, 2011). Furthermore they all emphasised how they spent many hours in the garden during the establishment. Siyakhana group member eight says that “it was us, the Siyakhana ladies” who originally dug the soil and established the garden (Siyakhana group member eight, December 02, 2010).

However due to their full time commitments at the ECDCs none of the Siyakhana group are involved in the physical gardening activities at the food garden. With the growth and formalisation of the garden it became evident that temporary labour once or twice a week was not going to be sufficient to maintain a productive food garden. As permaculture is concerned with developing the land, it is much more labour intensive than other agricultural systems in which the main costs lie with infrastructure such as tunnels and fertiliser. There are eight full time gardeners who work in the food garden and numerous volunteers. The Siyakhana food garden is a highly planned food garden with a complex mix of permaculture and ecological health initiatives. It is not just a plot of land where a few vegetables and fruit trees are grown.

## **Relationship of the Siyakhana group and initiative**

The Siyakhana group have monthly meetings at the ECDC forum which “take place once a month in Yeoville” (Siyakhana group member four, December 14, 2010). The majority of the Siyakhana group reported that at these meetings the group do not only discuss the ECDCs but also chat about the Siyakhana food garden and the larger initiative. Siyakhana group member five explains that “when we meet we discuss the way forward not only for the ECDCs but also for the garden. We think about our aims as ECDCs and share ideas which help each other particularly in terms of problems which we have experienced and overcome” (Siyakhana group member five, November 08, 2010). Siyakhana group member seven says “we discuss all sorts of issues pertaining to the ECDCs and our own lives” (Siyakhana group member seven, January 19, 2011). Despite the friendship and support amongst the Siyakhana group, in the past their relationship with the initiative has been troublesome. Many previous research studies have indicated there have been problems with the communications between the Siyakhana group and the initiative (Sachs, 2010; Bauta et al., 2008). The overall theme was a break-down in communication where the Siyakhana group felt that Wits was running with the programme on its own and keeping the group in the dark. According to Sachs the “ECDC ladies are upset over communication issues” (Sachs, 2010: 50). It is possible that the frustration of the Siyakhana group and their attitude towards the Siyakhana initiative was further aggravated by the lack of food deliveries that were expected from January 2009 to September 2010. On the other hand the initiative was despondent with the lack of participation from the Siyakhana group in visiting the food garden with their ECDCs and attending meetings. Chinemana observed this trend four years ago, however did not give any reasons for the poor attendance rates (Chinemana, 2006). He also reported that there was high irregularity and inconsistency of the representatives of the group to attend meetings (Chinemana, 2006).

These issues surrounding communication and transparency were also confirmed by Professor Rudolph (project director) who said to date that the most difficult aspect of the project has been the involvement of the ECDCs and NGOs and the funding (Professor Rudolph, December 20, 2010). Over the past year however there have been significant



changes in the relationship between the group and the initiative with positive efforts towards change being shown from both sides. These changes began with the Siyakhana group who wrote a letter to Professor Rudolph during 2010, apologising for their lack of interaction with the Siyakhana initiative over the past year (Sachs, 2010: 52). From the Siyakhana initiative side, Hlangi Vundla (stakeholder engagement manager) was appointed in June 2010 to foster and strengthen the relationship with the Siyakhana group.

This research uncovered that amidst the miscommunication between the Siyakhana initiative and group there was no clear understanding of the expectations of both parties. The entire Siyakhana group felt that the regular meetings in the context of the ECDC forum were sufficient to update all the members on the food garden and thus they did not see it as a problem that the group did not meet regularly in the context of the Siyakhana initiative. Furthermore it seems as if there was a misunderstanding from the Siyakhana initiative as to why the group did not bring the children of the ECDCs to the garden and attend the meetings. It was assumed that this was because of the disinterest of the Siyakhana group, however as we will discuss later it is much more complex than this. Despite the monthly ECDC forum meetings, Hlangi Vundla felt that it was necessary for all parties (including the gardeners) to get together on a regular basis to engage in shared discussions. Since the appointment of Hlangi Vundla project meetings have been organised on a monthly basis (with the exception of December as the ECDCs were closed for the holidays). Based on the request received from two Siyakhana group members, a weeks' notice is given for the meetings and they are scheduled for the middle of the month as opposed to the beginning of the month which is a very busy time for the ECDCs. The Siyakhana meetings take place in the City Parks building which is a few hundred metres from the Siyakhana food garden. This building is in a state of disrepair. At the time of the research the Siyakhana initiative had made an offer to the City Parks to rent the building and renovate it (at the project's cost) however the City Parks did not accept the offer. The close proximity to the food garden enables the Siyakhana group to walk around the food garden and see what is happening.

At these meetings the following general themes are discussed: communication, teamwork, deliveries, transparency, expectations, achievements and responsibilities. In terms of the responsibilities Hlangi Vundla explained to the Siyakhana group the new structure of the initiative which falls under the Wits Health Consortium (WHC). He also explained that under this new arrangement the Siyakhana group are still the primary beneficiaries and it does not affect their relationship with the initiative. Once the meetings are finished the initiative provides the Siyakhana group and the gardeners with lunch. The food is sourced from the food garden and prepared by Mandla Tshabalala (garden manager). The meal typically consists of whole-wheat spaghetti (or another starch), a vegetable burger and a simple salad made from red and green lettuce, tomatoes and served with a sunflower oil dressing. If there is any leftover food after the gathering it is shared with the Siyakhana group. The group said that they shared the food that they took home with their family and the children at the ECDCs.

Based on two meetings which were organised by Hlangi Vundla in September and October 2010, there was a twenty five percent and sixty five percent attendance rate by the Siyakhana group. The primary reason stated by the majority of the Siyakhana group for not attending the meetings was due to time and resource constraints. In terms of the resource and time constraints Siyakhana group member three explained that some of the Siyakhana group are studying for ECDC qualifications and therefore cannot always make the meetings. The other reasons why the Siyakhana group are unable to attend the meetings were the cost of transport to the garden and personal health issues. Siyakhana group member five explains “it is dependent on my time and if I have any other meetings on that particular day” (Siyakhana group member five, November 08, 2010). According to Siyakhana group member eight, another constraint that the ECDCs are faced with is that should an inspector from the Department of Education visit the ECDCs it is very important that the principal is present at the ECDC, this therefore restricts their availability during the day.

The entire Siyakhana group use public transport to get to the food garden for the Siyakhana meetings, however only two members of the group said that the cost of the transport was

problematic. The rest of the group were happy with the arrangement that was organised by Hlangi Vundla that it is their responsibility to get to the garden and Hlangi Vundla will drop them off after the meeting. For Silindokuhle transport is a major issue as the ECDC is based in Orange Farm which is approximately 35-40km from the Siyakhana food garden, if the ECDC was not so far Siyakhana group member seven says that she would visit the garden any time and attend all of the Siyakhana meetings.

Whilst the relationship between the Siyakhana initiative and group will take time to strengthen and the time frame upon which these findings are based is very small, clear efforts are being made by both the initiative and the Siyakhana group. The findings of this research diverge from those of Sachs who reported that the conflicts over a lack of communication and transparency were not lessened (Sachs, 2010: 52). Rather this research shows that it was not necessarily conflict but rather inaccurate expectations from both sides that caused the rift in the relationship. Siyakhana group member four says “yes there have been changes in the project particularly with the introduction of Hlangi” (Siyakhana group member four, December 14, 2010). This is reiterated by Siyakhana group member five who says that Hlangi Vundla is a positive force in helping achieve effective two-way communication between the group and the initiative “he keeps his word, he is good at communicating, he is respectful, provides advice and he is responsible. I am very proud to be involved in the project. As a representative of the Siyakhana project it is an honour” (Siyakhana group member five, November 08, 2010). According to Siyakhana group member eight she still loves the project despite the poor communication of the past. Hlangi Vundla also says that “in recent meetings the ladies have told me that they appreciate my role and that there is more transparency in our dealings” (Hlangi Vundla, March 15, 2011).

The Siyakhana initiative demonstrates a very important element of community development namely the process of re-thinking and reflection. This means creating new options by reconsidering issues and problems with new assumptions (Cavaye, 2011:6). Inherent in this strategy is willingness to experiment and take advantage of opportunities. By examining the way in which the Siyakhana initiative has approached the problems of

communication and transparency with the Siyakhana group we see how the initiative has adapted and changed processes to accommodate both parties. The initiative has adopted a flexible series of actions that are appropriate to the situation of the community. It is evident that community development is more than a planning process; it is an ongoing learning process where new attitudes and networks develop from action and reflection.

### **Secondary beneficiary: Gardeners**

The gardeners are classified as “beneficiaries” of the Siyakhana initiative as they receive food from the garden on a weekly basis. Mandla Tshabalala is the garden manager at Siyakhana. He started working at the food garden as a volunteer, later taking on a salaried position. Mandla Tshabalala had no background in farming, but learned quickly. Mandla Tshabalala explains that he went on courses to learn about crop production and permaculture, read lots of books and then built up his practical experience in farming. All of the current gardeners that work in the food garden were introduced to it through friends who were volunteering or working in the garden. Dumisani Madumo (full time gardener) explains “I first got involved with the project as a part time volunteer. I had no work and I was interested in recycling” (Madumo, December 07, 2010). John Mxumalo (full time gardener) says that he knew Patrick Khanye who encouraged him to volunteer in the garden as they were looking for employees. This is interesting as it shows that the environment created in the food garden is a positive one in which feelings of cooperation, teamwork and trust are fostered. By encouraging volunteering and then full time employment a unique form of empowerment is created with all the gardeners being able to seek solutions to their problems right from the beginning. Volunteering is a clear example that demonstrates that if people have stake in, have chosen and feel ownership of an initiative the results are successful and sustainable (full time employment) (David et al., 1997: 35).

The gardeners all have structured job descriptions, working hours and receive monthly salaries (this was criticised for not being in place in the first year of the project). Mandla Tshabalala says that “I am not interested in any other job”, “it is a joy to work in the garden” (Tshabalala, May 10, 2011). The garden manager is very accommodating in meeting the

needs and different situations of all of the gardeners. For example George Mahlombe (full time gardener) lives far from the garden so he is able to start earlier than all of the other gardeners to ensure that he does not get home too late to his family. Mandla Tshabalala works at the Siyakhana food garden two weeks a month and then the remaining two at his farm (this is reflected appropriately in the employment contract and remuneration is adjusted accordingly). When Mandla Tshabalala is at his farm, the gardeners work together as a team each with their own roles and responsibilities. For example Sarah Mashala (full time gardener) is responsible for collecting seeds from the garden, harvesting them and then keeping them in the seed bank, planting, managing the nursery, drying herbs, making the herb salts and weeding.

This chapter has explained the complex organisational structure of the Siyakhana initiative by providing detailed descriptions of all the key role players. In providing these descriptions the chapter has looked at the roles and responsibilities of the various players and how they interact and connect with one another. For ease of reference the Siyakhana organisational structure was split into “Siyakhana staff” and “Siyakhana beneficiaries”. The gardeners and the Siyakhana group make up the Siyakhana beneficiaries as both groups receive food from the garden. Given that the Siyakhana group are the primary focus of this research, the relationship between the group and the initiative was explored. The historical relationship between the two groups was examined to contextualise the current situation. In this section I highlighted the resource and time constraints of the Siyakhana group members and how these affect their participation with the initiative. Based on the findings of the research one is able to conclude that within the broader themes of contribution, participation and communication, marked improvements have taken place, however further work still needs to be made in strengthening the relationship between the Siyakhana group and the initiative.

## **Chapter 6: The ECDCs and their contribution towards the inner city community**

This chapter provides an account of the Siyakhana members and their ECDCs. In this account I consider the Siyakhana group's day to day lives and the environment in which they operate their ECDCs. The purpose of this section is to enable a greater understanding of the multi-functional roles which are played by the members of the Siyakhana group and in addition to this, to demonstrate the highly time consuming and complex nature of running an ECDC. It also helps one to understand and contextualise the Siyakhana group and their relationship to the initiative described in the previous chapter. Being a principal and running an ECDC is not just about being at the ECDC on a daily basis, it involves a multiplicity of tasks ranging from financial management to administrative activities which will be described in the section below. And not to forget the planned learning activities appropriate to children's age and development. The wider theme of this chapter considers resource availability and how this affects the different individuals in the group in running their ECDCs. In determining resource availability I consider the following factors:

1. Infrastructure and urban form;
2. Human resource capability;
3. Funding and economic participation; and
4. Food and nutrition.

The Siyakhana group consists of a group of eight women who are all principals at their respective ECDCs. In terms of age and experience, this is equally shared across the Siyakhana group without a clear trend being discernable. However amongst the group the teaching experience ranges from 8-20 years. Three of the Siyakhana group are 51 or older, two of the Siyakhana group are between the ages of 41-50 and three of the Siyakhana group are between the ages of 31-40. Of the group, seven of them have NQF Level 5 ECDC Certificates, with one member having a NQF Level 1 ECDC Certificate. All these certifications are formal SETA qualifications. To complete the NQF certificate it takes an extensive amount

of time and dedication. It is a one year qualification which involves multiple courses and related assignments. In addition to these formal qualifications the entire group have also attended numerous other courses and teachings relating to health, education and ECDCs. These include Business Management courses from the Department of Education, courses on child abuse, training on HIV/AIDS awareness at ECDCs, Expanded Public Works Certificate, National Curriculum Statement (University of Witwatersrand), Life Skills, 3 Day Start Course (early intervention course).

Extensive planning, skill and expertise goes into the management of the ECDCs, they are run as successful businesses. Running an ECDC involves long hours with some of the ECDCs opening at 07h00 in the morning (or others earlier) and finishing at 17h00 (some of the ECDCs have aftercare). Siyakhana group member five says “I encourage the parents to bring the children in early and before work and I am available at the ECDC from 06h00 in the morning” (Siyakhana group member five, August 05, 2010). For this member one of the most difficult aspects of running the ECDC is the timely attendance of the children. She explains that some of the parents bring the children at about 09h00 which means that they have missed the majority of the morning which is the most valuable time for teaching, as the children are most attentive in the morning.

On a daily basis, the day begins with a teacher taking the attendance register. At all of the ECDCs the attendance register is displayed in the front of the ECDC or in the front office. Siyakhana group member three explains to me the importance of taking the attendance register as it ensures that there is accountability for all the children in the school. In addition to the attendance register, there are numerous other administrative duties at the ECDCs. As a legal requirement associated with running an ECDC full records must be kept in the ECDC. These records include a copy of health and immunisation certificates, personal information and all work that they children do at the ECDC. Siyakhana group member two explains that “it is important to have these files and the records completed at all times, if the social worker comes for an inspection of the school it is important that she can show them all of this material” (Siyakhana group member two, July 26, 2010). All creative artwork is used to

measure the level of development of the child and their readiness for attending a primary school (if they are five years old). Another requirement of all the ECDCs is the keeping of an up to date visitors book. Every time I visited any of the ECDCs I signed the book. All of these requirements demonstrate that there is effective administration and on-going systematic evaluation at all ECDCs of the Siyakhana group.

**Figure 5. Attendance register and play area at Kideo**



From the visits made to all of the ECDCs, the love, care and passion of all the principals towards the ECDCs and the children is clear. The services offered by the ECDCs are invaluable to the inner city community. All of the principals are actively involved in the teaching and the activities at the ECDCs – there is no doubt that they are much more than just figureheads. This was seen during the participant observation where at all of the ECDCs, individual attention is given to each and every child and all children are treated in a fair and equal manner. All ECDCs are highly organised with pre-determined activities, lessons, meals and timings. Despite the poor state of the infrastructure of the buildings of all of the ECDCs, they are extremely well run facilities. During lesson times at all of the ECDCs, when playing games such as the “name game”, “letter game” and “family information game” these would be conducted in a methodical manner ensuring that each child has his/her chance to speak (no matter how quick or slow they were). When the small children fell at the school, the teaching staff would pick them up and hold them speaking quietly to them. At meal times all the children receive equal quantities of food and the bowls would only be cleared once the



last child had finished eating. To the inexperienced these techniques may seem simple but Siyakhana group member two explains “you can see how exhausting it is to be a teacher”, it is very hard work keeping all of the children under control (Siyakhana group member two, July 26, 2010).

The love and care is implicit in Siyakhana group member five’s response where she explains that she loves and cares for the children as their parents would: “I am not a teacher but a mother. I am here for the children while their mothers and fathers are working” (Siyakhana group member five, July 29, 2010). This really is true as all of the children call the teachers and the principal “Mama”. This Siyakhana group member used to be a hairdresser and ran her own salon. One day she had a turning point, when one of her customers said to her that her neighbour’s child had fallen out of the window because there was no one at home to look after him. The teaching approach of Siyakhana group member five stands out from all of the other ECDCs and it is based on the concepts of the Matal course. The Matal course is an intensive course (two years) and is based on the principle that the role of the teacher is to provide guidance and support for children to enable them to realise their own self-discoveries for themselves. In 2002, Siyakhana group member six received a trophy for service of excellence granted by the Rotary Association which recognised the Siyakhana group member’s dedication to her ECDC cause and the surrounding community.

### **Infrastructure and urban form**

This section provides insight into the facilities and infrastructure of the ECDCs. It is pertinent to our discussion relating to poverty and food security as the findings provide information on the wider Johannesburg infrastructure and urban form. Based on the infrastructure (a healthy and safe environment for adults and children), size, educational equipment and tools (varied age-appropriate materials) and amenities, one can clearly see that some of the ECDCs are better off than others. It should be noted however that when referring to the “upper bracket” and “lower bracket” this is a relative term bearing in mind that all of these ECDCs fall in low income areas of the inner city in Johannesburg. The entire Siyakhana group are faced with resource constraints based on the surrounding communities for which they

cater. They all explain how despite the challenges of running an ECDC they cannot charge a lot because the inner city community would not have the ability to pay. The research shows that is often the economically active population upon whom many people depend who are the most severely affected by food insecurity and poverty are (Rudolph et al., 2008: 34). There are four ECDCs which based on their infrastructure are better off than the other ECDCs. These four ECDCs are: Casita de Chocolate Pre-School, Kideo, Little Eagles Daycare and Pre-School and The Little Roses Daycare and Pre-School. **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs)**. The “lower bracket” of the ECDCs facilities does not have access to a significant reserve of economic resources. In particular this is seen in the infrastructure of these ECDCs which are much poorer and smaller than the “higher bracket”. These ECDCs also have more basic educational equipment and tools and fewer amenities.

#### Higher bracket ECDCs (relative to the other ECDCs in the Siyakhana group)

1. Casita de Chocolate Pre-School;
2. Kideo;
3. Little Eagles Daycare and Pre-School; and
4. The Little Roses Daycare and Pre-School.

#### Lower bracket ECDCs (relative to the other ECDCs in the Siyakhana group)

5. Downtown;
6. Mai Mai Khuthala Pre-School;
7. Love Peace Educare and Pre-School; and
8. Silindokuhle.

In general the findings show that those ECDCs in the higher bracket have been at the existing facility for on average twelve years which is double the time of those ECDCs which fall in the lower bracket, who on average have been at the existing facility for six years.

**Table 1. Length of operation at existing ECDC**

| Length of operation in years of ECDC at the current facility |    |                                 |    |
|--|----|---------------------------------|----|
| Higher bracket   |    | Lower bracket                   |    |
| Casita de Chocolate Pre-School                               | 20 | Downtown                        | 1  |
| Kideo  | 1  | Love Peace Educare & Pre-School | 8  |
| Little Eagles Daycare & Pre-School                           | 9  | Mai Mai Khuthala Pre-School     | 14 |
| The Little Rose Daycare & Pre-School                         | 17 | Silindokuhle                    | 2  |

### Higher bracket ECDCs

Casita de Chocolate Pre-School is located in Berea and the ECDC building is a renovated house, the building is not shared with anyone else. **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs)**. The building has an exterior wall, is in good condition and has well maintained ornamental flower beds.

**Figure 6. Casita de Chocolate Pre-School**



The Berea neighbourhood is Johannesburg’s first residential City Improvement District (CID) and visible efforts can be seen of the upliftment of the area with clean streets, CCTV cameras and guards on some street corners. As well as the positive signs of improvement and inner city rejuvenation which are exhibited in the area, the school is well equipped with two large classrooms, a baby’s room, a kitchen and two out-rooms. The kitchen, which is used to prepare the food for the children, is the original kitchen in the house. There is cupboard space for the storage of the plates and cutlery, double sinks, a large fridge, a stove and counter areas for the preparation of the food and large plastic yellow buckets in which

various grains are kept. The ECDC has adequate space for future growth with two out-rooms at the back of the main house. The one out-room is unused but the other out-room is used in the afternoons for children under 1 to have an afternoon sleep and is equipped with twelve cots. The parents who drop the children off in the morning were all well dressed and a large majority dropped the children off in cars. Based on the infrastructure and the appearance of the dress of the parents and their mode of transport it can be deduced that the resource availability of this ECDC is higher than that of the lower bracket ECDCs.

This pattern in fact tells us an important fact about the infrastructure and urban form in Johannesburg – that there is still a huge reliance on private motorised transport (Rudolph et al., 2008: 34). The influence of location however is far more critical for those members of society who do not have access to public transport. For example when Downtown moved only 2kms away from its previous premises it lost many children. This highlights the low socio-economic environment within which the ECDCs are operating. Their clients are highly sensitive to location, possibly as there is a lack of transport or that the additional transport costs make it too expensive for them to send the children to the new location of the ECDC.

Kideo, the second ECDC in the “higher bracket” is located in the inner city on the second floor of a well maintained building. **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs).** The outer appearance of the building is mirrored; there is underground parking, a full time security guard at the entrance of the building and a lift. This ECDC is by far the largest of the ECDCs of the Siyakhana group and has the most resources and equipment. There is a large indoor play area (with lots of different play equipment), a waiting area with a couch and TV, and an office with a computer and printer, a well equipped kitchen and adult flushing toilets. There are multiple classrooms, a storeroom for arts and crafts, a sick room and all the rooms had been newly painted by Kideo when they moved into the facility.

Little Eagles Daycare and Pre-School, the third ECDC in the “higher bracket” is based in Yeoville. **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs).** Yeoville is a

vibrant suburb in Johannesburg, with informal street trading taking place on nearly every street corner. The ECDC has been established for nine years and it was started by the current principal. In the front of the ECDC there is a large play area with different types of jungle gym equipment and a hop-scotch track painted on the cement. The ECDC is based in a stand-alone building which has a palisade fence and an electric gate. The building is in good condition, with beautifully painted cartoon figurines on the front walls and exterior of the building. The principal of Little Eagles Daycare and Pre-School parks her car in the front yard of the school as she drives from Krugersdorp on a daily basis. This ECDC is a good example of the relativity of the concept of “higher bracket” and “lower bracket”. Despite the exterior appearance, inside it is very modest with only one large classroom in which all the children (regardless of age) are taught and cared for. In the back there is another room which is used for storage, there is a very small kitchenette off the main teaching room, and one adult toilet and a few children’s toilets. There is very little furniture in the ECDC, however it is warm and welcoming, with decorations which have been made by the children hanging from the roof. Siyakhana group member two explains that even a bag of mielie meal or a few nappies a month as a donation from one of the Siyakhana partners would help her, as many of the people in the area are informal traders who do not have a secure source of income to pay for the children’s fees.

The Little Roses Daycare and Pre-School is the fourth and final ECDC of the “higher bracket” which is located in the emerging city and suburban area in Johannesburg’s Eastern Central Business District (CBD) in close proximity to Ellis Park and Jewel City. **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs).** In the neighbourhood there is a unique blend of studio, commercial, residential and retail spaces. The building is well painted with small little ducks on the outside and the name of the school on the wall.

**Figure 7. The Little Roses Daycare and Pre-School**



When one walks into the building there is a large play area with small coloured plastic tables and chairs scattered around the area, a well equipped kitchen and an office which has a computer and printer in it. The bathroom has ten children's toilets and upstairs there are four classrooms (divisions based on age groups). All the staff members have uniforms which consist of black pants and navy blue dry macs with the ECDCs emblem embroidered on the jackets. There are strict guidelines in place with fixed hourly fees for aftercare (R75), contracts established between the parents and the ECDC, birthday party costs (for the birthday holder – R70 and other children – R30), and field trip costs – R130. The ECDC has business cards with the contact details, an email address and the motto “for the little ones we care for they're the future of our nation”. The ECDC also has an appointed ECDC and parent committee who meet on a monthly basis, with representatives for general affairs, fundraising, financial management and accounting.

### **Lower bracket ECDCs**

Love Peace Educare and Pre-School is located in a dilapidated block of flats in the inner city. The ECDC is on the first floor of the building and is the only part of building which does not have any broken panes of glass in the windows and is litter free. However despite the poor state of the rest of the building a lot of money has been spent by the ECDC in replacing all the broken panes of glass in the ECDC (R2000) and changing all of the locks of the ECDC (each lock costs R40 to change). Despite the overall degeneration of the building when you reach the ECDCs floor and walk into the ECDC, it is impeccably clean and very tidy. Although the space of the teaching area is small compared with the ECDCs in the “higher bracket” it is well equipped with a small office, play area, lockers for the children's belongings, books, stationery and plastic jungle gym equipment. In the past there used to be a cooking school located on the same floor of the ECDC so there is a huge kitchen in which to prepare the food for the children.

Mai Mai Khuthala, the second ECDC in the “lower bracket” is based in the Mai Mai Bazaar which is the oldest traditional healers market in Johannesburg (based in the eastern wing of the city centre). **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs).** Following years of neglect with crumbling infrastructure and blocked sewerage and storm

water drainage the Mai Mai bazaar is now under a process of rejuvenation. The market area which surrounds the ECDC is clean with municipal workers often seen sweeping the paths of the market and security guards are posted at all corners. The ECDC is based in the former “beer hall” (it used to be based in the community hall but according to Siyakhana group member six there were major dust problems making the site unsuitable for an ECDC). When the ECDC took over the former “beer hall” the majority of the building had crumbled to the ground and she had to salvage and fix the building as best she could. Due to the poor state however, the ECDC was doing renovations for almost the entire year (2010) which was extremely time consuming and costly “I [Siyakhana group member six] have been too busy with the renovations at my school to attend every meeting that has been organised” (Siyakhana group member six, December 08, 2010).

This ECDC is testament of the “can do” attitude of the staff, Siyakhana group member six says “we do with what we have” because she cannot wait for people to give her hand outs and she is unable to renovate the whole building as she would have to close the ECDC for that period, which would be a major disruption to the children and a huge revenue loss (Siyakhana group member six, June 28, 2010). One can see this on the roof where there is some cardboard plastered to try and prevent the leaks from dripping water into the classrooms. Similarly on the floor there are patches of carpet to try and cover the concrete floors. During winter it was freezing inside of the classrooms as the wind blows through the cracks in the walls and roof. There are four classrooms, a kitchen, an office and a toilet area with children’s toilets only. Under these constraints however the staff show great ingenuity, creating a welcoming environment by decorating the ECDC with anything and everything they can find or receive. This includes scraps of brightly coloured cardboard and wrapping paper, second hand educational posters and toys: “we are grateful for anything” (Siyakhana group member six, June 28, 2010). The principal explains that she teaches this resourcefulness to the children and sometimes they go and visit the dump site in the market and collect old bottle tops, cardboard boxes and other recyclable goods that they use to make toys and to play with. Due to the market for which this ECDC caters there are no afterhours charges “the children get dropped off whenever is suitable for the parents from

06h00 and can get picked up at around 18h00” (Siyakhana group member six, June 28, 2010).

Downtown, the third ECDC in the “lower bracket” is based on the third floor of a large primary school building in the inner city. **(Refer to figure 1. Map of the Siyakhana food garden and ECDCs).** The ECDC moved from its former location in the inner city due to the exorbitant rent costs. Siyakhana group member two paid over R5000 (excluding water and electricity) for two small rooms (with broken windows and cracked walls). According to Siyakhana group member two these high rent costs coupled with the sporadic payments of the parents made it very difficult for her to pay the rent on a monthly basis “some months I had to use the teachers pay to pay for the rent” (Siyakhana group member two, June 29, 2010). According to the City of Johannesburg website, when an ECDC is established in a building the landlord often regards it as an income generating business and increases the applicable rent beyond what the owner or facility can afford or in turn pass onto clients (City of Johannesburg, 2011). The research shows that this is exactly what has happened in the case of Downtown.

The street of the new location is clean and lined with trees and there is a full time security/parking guard at the entrance. The facilities of the primary school are well maintained with a large playground in the courtyard of the school. Downtown rents two rooms in the building (one room is used for the kitchen and the other as the classroom) and is adjacent to another ECDC which has been in the building for a long time. There are toilets on the floor which are shared by all the classrooms and the other ECDC on the floor. The classroom is simple with a few photos and educational posters on the wall, a wooden desk and chair in the corner and a stack of sponge mattresses in the corner (for the children’s afternoon sleep). The kitchen cannot really be classified as a “kitchen” as it is merely a small counter with a basin and a stove next to it. However due to the fact that the ECDC had just moved to this location Siyakhana group member two explained that she still had lots to do in getting the two rooms to the standard she would like.



**Figure 8. Downtown**



A similar problem with exorbitant rent and poor infrastructure in the inner city was experienced by the principal of Silindokuhle, who decided to move her ECDC to Orange Farm. Silindokuhle which is the final ECDC in the “lower bracket” is off the main tar road and one has to drive a few kilometres on a dirt road. Orange Farm is approximately 35-40km from the other ECDCs of the Siyakhana group and the food garden, hence for scale purposes it has not been shown on the map of the Siyakhana food garden and the ECDCs. Based on a report of food security, poverty and health in three study areas in Johannesburg in 2008, average household income and expenditure in Orange Farm is half of that in Alexandra (Rudolph et al. 2008: 13). Apart from the lower income levels food price changes also affected Orange Farm the most severely compared with Alexandra and the inner city (Rudolph et al., 2008: 24). Orange Farm is characterised by extensive low-cost housing settlements, spatially and economically marginalised and highly politicised (Rudolph et al., 2008: 13).

Silindokuhle is fenced off by corrugated iron sheets, with two classrooms (one for the babies and one for the other children). The ECDC has very basic amenities and the children play in the sand and on one small plastic slide that they have. Inside the classrooms are decorated with the children’s artwork and a few educational posters. In the shade of the trees there are some small plastic potties and a plastic basin, filled with water and a bar of soap which is in a stocking and attached to the tree. The kitchen is in a small iron shack,

however it is well equipped and very tidy with a fridge inside (on which the daily menu is displayed), a small sink area, a kettle and a microwave. On the sink counter there is a large metal pot and there are plates and dishes in a small cupboard at the back of the shack. The ECDC in Orange Farm highlights the need to enhance water, sanitation and electrification services in our country (Rudolph et al., 2008: 34).

**Figure 9. Silindokuhle**



This section has provided insight into the facilities and infrastructure of the ECDC. It is important to our discussion relating to poverty and food security as the findings provide information on the wider Johannesburg infrastructure and urban form. The experiences of the ECDCs demonstrate the significant ways in which infrastructure and the urban form can affect food security and the challenges of working operating within low socio-economic communities. In the next section we will look towards funding and economic participation which the research demonstrates is largely affected by the infrastructure at the ECDCs.

### **Human resource capability**

In determining the resource capabilities of the Siyakhana group the third aspect of their ECDCs that was considered was the child to staff ratios. The general trend seen across the Siyakhana group is that all of the ECDCs in the higher bracket have higher total children numbers than the lower bracket (with the anomaly of Mai Mai Khuthala Pre-School). A direct correlation can be seen between the total number of children and the size of the

ECDCs. Furthermore there is a link between the number of years the ECDC has been operating at the current site and the number of children per ECDC. The three ECDCs with the highest number of children (Casita de Chocolate Pre-School, The Little Roses Daycare and Pre-School and Mai Mai Khuthala Pre-School) have also been at their current facilities for the longest period (twenty years, seventeen years and fourteen years respectively). The children numbers were collected during the middle of the year in 2010 (with the exception of Silindokuhle). In response to the numbers the entire Siyakhana group said that they expected an increase in the total number of children in 2011 as the demand for ECDCs in the inner city continues to grow every day.

**Table 2. Total number of children per ECDC**

| Total number of children per ECDC     |     |                                 |                 |
|---------------------------------------|-----|---------------------------------|-----------------|
| Higher bracket                        |     | Lower bracket                   |                 |
| Casita de Chocolate Pre-School        | 100 | Downtown                        | 37 <sup>8</sup> |
| Kideo                                 | 85  | Love Peace Educare & Pre-School | 50              |
| Little Eagles Daycare & Pre-School    | 80  | Mai Mai Khuthala Pre-School     | 106             |
| The Little Roses Daycare & Pre-School | 94  | Silindokuhle                    | 42 <sup>9</sup> |

The pupil teacher ratio for the Siyakhana group was determined by taking the total number of children at the ECDC divided by the number of teachers (Project STAR, 2011). The pupil staff ratio was determined by including with the teachers, the entire staff compliment of the ECDC. This includes the cleaners, cooks and baby carers. Prior to performing the research I assumed that the ECDCs in the higher bracket would have lower pupil teacher and staff teacher ratios than the lower bracket as they have higher monthly income and thus can employ more resources.<sup>10</sup> The research confirms this with the majority of the ECDCs in the higher bracket having a lower pupil staff ratio than pupil teacher ratio which indicates that there are additional staff who assist in the running of the ECDC. On the other hand, when

<sup>8</sup> During the research this ECDC moved location. The total children number is based on the original children number as the principal explained that as it was the first month in the new location, the class numbers were still low.

<sup>9</sup> This number was taken at the beginning of the year opposed to the other data which was collected in the middle of the year. According to the principal the total number of children was expected to increase, but it normally takes some time after the holidays.

<sup>10</sup> Due to the sensitive financial environment in which Siyakhana group operate, this research did not investigate the monthly income of the ECDCs. However the monthly spend on food was determined which will be discussed in the next section.

looking at the ratios of the lower bracket of the group the majority of the ratios remain the same when comparing pupil teacher ratios and pupil staff ratios. In summary the lower bracket of the Siyakhana group are less resourced than the higher bracket and teachers are required to multi-task.

**Table 3. Pupil teacher ratio**

| Pupil teacher ratio                   |    |                                 |    |
|---------------------------------------|----|---------------------------------|----|
| Higher bracket                        |    | Lower bracket                   |    |
| Casita de Chocolate Pre-School        | 13 | Downtown                        | 12 |
| Kideo                                 | 14 | Love Peace Educare & Pre-School | 17 |
| Little Eagles Daycare & Pre-School    | 20 | Mai Mai Khuthala Pre-School     | 18 |
| The Little Roses Daycare & Pre-School | 16 | Silindokuhle                    | 11 |

**Table 4. Pupil staff ratio**

| Pupil staff ratio                     |    |                                 |    |
|---------------------------------------|----|---------------------------------|----|
| Higher bracket                        |    | Lower bracket                   |    |
| Casita de Chocolate Pre-School        | 11 | Downtown                        | 12 |
| Kideo                                 | 12 | Love Peace Educare & Pre-School | 17 |
| Little Eagles Daycare & Pre-School    | 20 | Mai Mai Khuthala Pre-School     | 15 |
| The Little Roses Daycare & Pre-School | 12 | Silindokuhle                    | 11 |

Key

|  |   |
|--|---|
|  | Pupil staff ratio is lower than pupil teacher ratio. This means that the ECDC(s) have additional resources for tasks other than teaching.                                       |
|  | Pupil teacher ratio and pupil staff ratio remains the same. This means that there are no additional resources and the teachers also perform tasks such as cleaning and cooking. |

**Table 5. Break down of the staff numbers of the upper bracket of the Siyakhana group**

|                                | Casita de Chocolate | Kideo | Little Eagles | Little Roses |
|--------------------------------|---------------------|-------|---------------|--------------|
| Teachers (including principal) | 8                   | 6     | 4             | 6            |
| Full time cleaner              | 1                   |       |               |              |
| Full time cook                 |                     | 1     |               | 1            |
| Administration resource        |                     |       |               | 1            |

**Table 6. Break down of the staff numbers of the lower bracket of the Siyakhana group**

|                                | <b>Downtown</b> | <b>Love Peace Educare &amp; Pre-School</b> | <b>Mai Mai Khuthala</b> | <b>Silindokuhle</b> |
|--------------------------------|-----------------|--|-------------------------|---------------------|
| Teachers (including principal) | 3               | 3  | 6                       | 4                   |
| Full time cleaner              |                 |  |                         |                     |
| Full time cook                 |                 |  |                         |                     |
| Administration resources       |                 |  |                         |                     |
| Baby minder                    |                 |  | 1                       |                     |

If we look to the higher bracket of the Siyakhana group Casita de Chocolate Pre-School has eight teachers (including the principal) as well as a cleaner who is employed full time by the ECDC. Kideo has six full time teachers and in addition to this a full-time cook. Little Eagles Daycare and Pre-School does not have any full time staff members dedicated to cooking or cleaning. The Principal explains to me that the four teachers (including the principal) all take turns to do these duties and they perform the duties based on a rotational shift basis. The Little Roses Daycare and Pre-School has six full time teachers (including the principal) and one full-time cook and one administration resource. These statistics are interesting and help one to understand the operations of those ECDCs in the lower bracket of the group because the entire lower bracket of the group do not have any full-time resources allocated to cleaning, cooking or administration. Both Downtown and Love Peace Educare and Pre-School have three teachers (including the principal) with no other resources. Silindokuhle has four teachers (including the principal) and Mai Mai Khuthala Pre-School has six teachers (including the principal) and one resource that looks after the babies.

### **Funding and economic participation**

Compared with primary schooling where private funding plays a relatively small role, all of the ECDCs being independent institutions are fee-based. The primary ways in which funding is received is through parents' fees, community fundraising and/or donations of material. However due to the low income communities in which these facilities are operating, many of the parents are unable to pay for the school fees and the ECDCs subsidise a number of children. According to the City of Johannesburg a 2005 survey estimated two hundred and twenty five ECDCs in the inner city, but only a small proportion of these are registered with

the provincial government, and are therefore entitled to provincial financial support (City of Johannesburg, 2011). The financial support can go towards the food, cleaning materials, rent and the teachers' salaries.

**Table 7. ECDC subsidies**

| Percentage of children subsidised per ECDC          |     |   |     |
|---|-----|---|-----|
| Higher bracket                                      |     | Lower bracket                                 |     |
| Casita de Chocolate Pre-School <sup>11</sup>        | 5%  | Downtown                                      | 7%  |
| Kideo <sup>12</sup>                                 | 50% | Love Peace Educare & Pre-School <sup>13</sup> | 6%  |
| Little Eagles Daycare & Pre-School                  | 53% | Mai Mai Khuthala Pre-School                   | 5%  |
| The Little Roses Daycare & Pre-School <sup>14</sup> | 5%  | Silindokuhle                                  | 14% |

The findings of the research reflect the findings of the 2005 survey showing that only half of the ECDCs of the Siyakhana group are registered with the provincial government. The majority of the ECDCs (of the Siyakhana group) who receive financial support from the province fall within the higher bracket of the group with only one falling in the lower bracket. Of the higher bracket two out of the four ECDCs receive financial support and one meets all the requirements but is waiting for the local authorities to assess the facility in terms of the structural and health requirements. At the time of the research this ECDC had been waiting over three weeks for the inspectors to come to the facility. This is particularly problematic for the ECDC as half of the children that attend the ECDC are subsidised. According to Siyakhana group member three says that “all parents pay what they can” (Siyakhana group member three, December 02, 2010). Therefore without the necessary support from government it puts additional pressure on the ECDC. The Little Eagles Daycare and Pre-School are very close to applying for the certification, with everything completed except for the emergency exit (which needs to be fitted with an emergency door). To get the ECDC to this point however has taken nine years as many of the parents are informal traders, therefore when they do not make money they cannot even feed the children let alone pay the school fees: “due to the sporadic payments from the parents of the children,

<sup>11</sup> Receives funding from the Department of Education

<sup>12</sup> Facility is up to an acceptable standard for accreditation – but waiting for Department of Social Development inspection

<sup>13</sup> Receives funding under the integrated nutrition programme

<sup>14</sup> Receives funding from Gauteng Department of Health and Social Development

food for the ECDC is bought “little bit by little bit” (Siyakhana group member four, December 14, 2010).

To qualify for government/department funding the ECDC has to be accredited. This accreditation requires certain minimum standards (certificates and registrations) to be in place at the ECDC and is accompanied by regular visits and inspections (on average once a month) from the department. According to the Department of Social Development the follow steps need to be followed to apply for funding (Department of Social Development, 2011):

- Complete an application form for registration as a place of care;
- Develop a weekly menu and daily programme;
- Submit;
  - A building plan/hand drawn sketches of building;
  - A copy of constitution, signed and dated (for funding purposes);
  - A service or business plan (for application for funding);
  - A financial report of the past year (for funding purposes);
  - A contract with the owner of the building (lease - for funding purposes); and
- Undergo assessment from the local authority on structural and health requirements.

Once the ECDC has been registered with the provincial government, monthly reporting must take place. The principal of The Little Roses Daycare and Preschool says “in order to make use of these funds you have to be accountable and transparent and keep every single slip from each purchase, no matter how small it is” (Siyakhana group member eight, December 02, 2010). The entire Siyakhana group reported however that the administrative requirements are not a concern; it is the cost of the structural and health requirements which are the challenge.

In order to reach the minimum standards (for the structural and health assessment) obviously involves time and monetary contributions and thus without steady income from the parents it is very difficult for many of the ECDCs to improve the infrastructure at their

facilities. This is reflected by the fact that only one ECDC in the lower bracket is accredited to receive funding. Principal of Love Peace Educare and Daycare however feels that the process of accreditation encouraged her to make infrastructure upgrades to the ECDC building and to have set timelines against which to achieve the changes. Furthermore she explains that whilst the minimum standards are high it is good because “it strengthens all the facilities and upgrades the standards of all the facilities” (Siyakhana group member five, August 05, 2010). It “involves the filling out of multiple forms and detailing exact information from the ECDC” (Siyakhana group member five, November 08, 2010).

The remaining three ECDCs of the Siyakhana group (Downtown, Mai Mai Khuthala Pre-School and Silindokuhle) are unable to apply for financial support as they know that they do not meet the structural and health requirements. Siyakhana group member two explains that to qualify for a grant is a “catch 22 situation”. Without sufficient economic resources one cannot upgrade the facility and make the infrastructure improvements, and in not meeting the minimum requirements one cannot apply or qualify for government funding. Siyakhana group member two explains that in the future she hopes for greater exposure of her ECDC to the partners and funding organisations of the Siyakhana food garden. She feels that if she is given this opportunity she may be able to receive funding which can be used to make improvements at the facility. Similarly Siyakhana group member seven says that she needs to grow her ECDC and add on more classrooms and buy more equipment before she can apply to the department. Siyakhana group member six says that with her small budget her first priority is to feed the children, then structural and health improvements to the building and finally visits to the garden: “money cannot be spent on visiting the garden when I have lots of hungry stomachs to feed” (Siyakhana group member six, December 08, 2010).

In addition to the funding which is received from the province some of the ECDCs also receive support from other sources. The Little Roses Pre-School and Daycare receives porridge from JAM which donates porridge to the ECDC. Love Peace Educare and Daycare has been receiving donations of blankets and clothes from the radio station 702 over the



past few years. Siyakhana group member eight shares these donations amongst the children, parents and teachers of the ECDC. With both of these ECDCs being registered with the Province the research indicates to the fact that with registration it may potentially be easier to receive assistance and support from other organisations. Mai Mai Khuthala Pre-School is supported by the following organisations: Rosebank Rotary, Park on 4th, St Georges Fikelela, Pick 'n Pay and King David. Siyakhana group member of the ECDC managed to secure the links with the King David School as she met one of the teachers from King David one day when she was visiting the Siyakhana food garden.

Given the financial constraints with which the Siyakhana group are faced it is understandable that in the past there were concerns surrounding funds for the garden and the transparency thereof (Bauta et al., 2008). However this seems to have largely changed and seems indicative of the way in which both the Siyakhana initiative and the Siyakhana group have grown and developed over the past six years. None of the Siyakhana group wished to be involved in the administrative aspects of the garden and the majority of the group were not interested in seeing the detailed financials of the initiative as they felt that receiving food on a weekly basis was proof enough that the money is being well spent. Siyakhana group member five says “as long as we receive what the garden can give then I am happy” (Siyakhana group member five, November 11, 2010). Similarly Siyakhana group member one says that receiving the food from the Siyakhana food garden on a weekly basis “is proof of the money being well spent” (Siyakhana group member one, December 14, 2010). The one member who was interested in seeing the financials said that she wanted to understand how much money was spent on the gardeners’ salaries as a percentage of the overall funding which the initiative receives. The other Siyakhana group member wanted clarity on the funding which is received from the National Development Agency (NDA).

The Siyakhana initiative has two bank accounts, one in the Siyakhana group’s name and one which falls under WHC. Siyakhana group member three is in charge of managing the Siyakhana group account. This account however does not hold funding contributions which can be used for the ECDCs. Rather it is an expense account off which the costs of the project

vehicle are deducted on a monthly basis. The project vehicle is registered in the Siyakhana group's name. These include insurance of the vehicle, petrol, maintenance costs and the tracking unit. Funds for visiting the garden are also deposited into this account however at the time of the research there was confusion as to how these funds could be accessed. One of the possible reasons for this confusion is that the Siyakhana group no longer have a chairperson. In 2009 the chairperson of the group (Siyophila Home Based Care (HBC)) passed away. Since her passing, the group have not appointed another member to this position. No reason was provided as to why a new chairperson had not been appointed. According to Siyakhana group member eight, Siyophila HBC would still like to be involved in the Siyakhana initiative but have to nominate a representative from their NGO.

### **Food and nutrition**

As the primary beneficiaries of the Siyakhana initiative the Siyakhana group receive fresh fruit and vegetables from the Siyakhana food garden on a weekly basis. Each ECDC receives the same amount and type of produce from the food garden on a weekly basis. In order to determine the effect of this supplementary food in assisting the ECDCs, it was necessary to understand the patterns of nutrition and feeding that take place at the facilities of the Siyakhana group. In considering the ECDCs nutrition and feeding patterns the following factors were analysed: sources of food used in the ECDC, monthly spend on food, total number of meals served per day, type of meals, size of portions, regularity of the meals, variety of foods offered and take home rations. Nutrition and food plays a crucial role in early childhood development as nutrition at an early age can diminish life chances for many young people. (World Bank, 2007: 60). As Donald Grant (MEC for education in the Western Cape) said "a hungry or frightened child cannot be effectively educated" (Hartshorne, 2011: 10).

## Sourcing of food

In order to determine where the majority of the Siyakhana group source their food, purchases were split across three main food groups and one additional category:

- Fresh fruit and vegetables;
- Meat (chicken, fish, beef);
- Staples (mielie meal, samp, beans, rice); and
- Emergencies (if the food runs out at the ECDC).

These categories of food were then analysed against three food sources: local shops, supermarket and street vendor and the reasons for making use of such sources (price, quality and convenience) were examined. The cash economy (supermarkets, shops, street vendor and informal markets) is the primary source of food, although the different Siyakhana members use the different sources with different regularity (Rudolph et al., 2008: 28). This is supplemented by the produce which is received from the Siyakhana food garden. The Siyakhana food garden represents a type of social network from which the Siyakhana group receive their food. Interestingly none of the Siyakhana group makes use of self-grown food in providing food for their ECDCs. The entire Siyakhana group purchase the food which is used at the ECDC. Even though Love Peace Educare and Pre-school and The Little Roses Pre-School and Daycare are sponsored by the government, JAM and the Food Bank, who donate food (this is used to supplement the food purchased on a monthly basis).

**Table 8. Sourcing of fresh fruit and vegetables**

| Fresh fruit and vegetables            |   |                                 |    |
|---------------------------------------|---|---------------------------------|----|
| Higher bracket                        |   | Lower bracket                   |    |
| Casita de Chocolate Pre-School        | L | Downtown                        | L  |
| Kideo                                 | S | Love Peace Educare & Pre-School | L  |
| Little Eagles Daycare & Pre-School    | L | Mai Mai Khuthala Pre-School     | SP |
| The Little Roses Daycare & Pre-School | L | Silindokuhle                    | SP |

### Key

S – Street vendor, L – Local shop, SP – Supermarket.

The majority (five out of the eight) of the Siyakhana group purchase fresh fruit and vegetables from a local shop, two members of the group purchase these items from a supermarket and one member of the group purchases fresh fruit and vegetables from street vendors. **(Refer to table 8. Sourcing of fresh fruits and vegetables)**. Siyakhana group member three (who buys her fresh fruit and vegetables off the street) reports that “the fresh produce from the streets is cheaper than in the conventional stores” (Siyakhana group member three, December 02, 2010). This finding differs from the literature which argues that food sourced from the informal economy often tends to be more expensive than food bought in supermarkets (Rudolph et al., 2008: 27). In comparison Siyakhana group member four specifically does not buy fruit and vegetables from street vendors as she says that the quality is not guaranteed and one cannot be sure of the freshness of the goods. This is reiterated by Siyakhana group member five who says that she cannot compromise on quality despite the financial constraints “If you buy from this type of shop [local vegetable store] you are guaranteed of the quality and know that there is no sun exposure as with foods that you buy off the side of the road” (Siyakhana group member five, November 08, 2010). When analysing the purchasing trends of fresh fruit and vegetables across the Siyakhana group no clear trend can be discerned when comparing the higher bracket and lower bracket of the group.

**Table 9. Sourcing of meat**

| <b>Meat</b>                           |    |                                 |    |
|---------------------------------------|----|---------------------------------|----|
| <b>Higher bracket</b>                 |    | <b>Lower bracket</b>            |    |
| Casita de Chocolate Pre-School        | SP | Downtown                        | L  |
| Kideo                                 | SP | Love Peace Educare & Pre-School | L  |
| Little Eagles Daycare & Pre-School    | L  | Mai Mai Khuthala Pre-School     | SP |
| The Little Roses Daycare & Pre-School | L  | Silindokuhle                    | SP |

Key

S – Street vendor, L – Local shop, SP – Supermarket.

Half of the Siyakhana group purchase meat from a supermarket and the other half of the group purchase meat from a local shop. **(Refer to table 9. Sourcing of meat)**. Interestingly there is no pattern across the higher and lower brackets of the group.

**Table 10. Sourcing of staples**

| Staples                               |    |                                 |    |
|---------------------------------------|----|---------------------------------|----|
| Higher bracket                        |    | Lower bracket                   |    |
| Casita de Chocolate Pre-School        | L  | Downtown                        | L  |
| Kideo                                 | SP | Love Peace Educare & Pre-School | L  |
| Little Eagles Daycare & Pre-School    | L  | Mai Mai Khuthala Pre-School     | SP |
| The Little Roses Daycare & Pre-School | L  | Silindokuhle                    | SP |

Key

S – Street vendor, L – Local shop, SP – Supermarket.

The majority (five out of the eight) of the Siyakhana group purchase staples from local shops, the remaining group source their staples from a supermarket. **(Refer to table 10. Sourcing of staples)**. Siyakhana group member one says: “I buy mielie meal and rice from Super Saving” (Siyakhana group member one, December 14, 2010). Siyakhana group member four reports that “I buy all of my groceries from the Jumbo store which is just down the road from the ECDC”. What is interesting to note is that the street vendors do not compete or sell any goods in this food category.

**Table 11. Sourcing of emergency food**

| Emergency food                        |   |                                 |   |
|---------------------------------------|---|---------------------------------|---|
| Higher bracket                        |   | Lower bracket                   |   |
| Casita de Chocolate Pre-School        | S | Downtown                        | S |
| Kideo                                 | S | Love Peace Educare & Pre-School | L |
| Little Eagles Daycare & Pre-School    | L | Mai Mai Khuthala Pre-School     | S |
| The Little Roses Daycare & Pre-School | L | Silindokuhle                    | L |

Key

S – Street vendor, L – Local shop, SP – Supermarket.

The final category which was analysed was where the Siyakhana group source emergency food if they run out at their ECDCs. Half of the Siyakhana group source their emergency food

from street vendors and half source it from a local shop. **(Refer to table 11. Sourcing of emergency food)**. This category is indicative of the low income environment in which the Siyakhana group operate. The discussion on funding and economic participation highlighted the sporadic and irregular payments which the ECDCs receive. This has a major effect on the group's ability to plan and purchase food on a weekly let alone monthly basis. The majority of the Siyakhana group buy food for the ECDC on a daily basis. Siyakhana group member three explains that "food is bought depending on the amount of money that comes in. One shop is not done at the beginning of the month" (Siyakhana group member three, December 02, 2010). Silindokuhle is the only ECDC which buys food on a monthly basis. By doing a monthly shop it helps to save on transport costs: "I buy the food from Checkers and Shoprite. I only buy spinach from the local shop in Orange Farm if I run out" (Siyakhana group member seven, January 19, 2011). The trend of Silindokuhle demonstrates that even when there are informal markets or roadside stalls that can minimise the high levels of mobility and long-distance commuting to the city, supermarkets are still the preferred source from which to buy food.

Aggregated across all food types both the upper half and lower half of the Siyakhana group procure the majority of their food from local shops. The primary factor in the decision of where to procure the different types of food was price. Five out of the eight Siyakhana group members (two from the higher bracket and three from the lower bracket) all stated price as the most important factor in their choice. Two members stated quality and one member stated convenience. Siyakhana group member eight says "it is just down the road from the ECDC and they deliver the food to the ECDC for free" (Siyakhana group member eight, December 02, 2010). Siyakhana group member one says that she goes once a week to the Jozi people's market to buy meat at wholesale prices for the ECDC. **(Refer to figure 10. Jozi people's market (S-Street vendor))**.

**Figure 10. Jozi people’s market - (S – Street vendor)**



**Monthly spend on food per month**

Based on the fact that price is the overriding factor in the choice of where to buy food from it is evident that the Siyakhana group are a particularly price sensitive group.

**Table 12. ECDC average monthly spend per month on food in ZAR**

| ECDC average monthly spend on food in ZAR |        |                                 |        |
|---|--------|---------------------------------|--------|
| Higher bracket                            |        | Lower bracket                   |        |
| Casita de Chocolate Pre-School            | R2 500 | Downtown                        | R1 000 |
| Kideo                                     | R4 000 | Love Peace Educare & Pre-School | R1 800 |
| Little Eagles Daycare & Pre-School        | R2 500 | Mai Mai Khuthala Pre-School     | R4 500 |
| The Little Roses Daycare & Pre-School     | R4 800 | Silindokuhle                    | R1 600 |

The average spend per month by the higher bracket of the Siyakhana group is R3450. The average spend per month by the lower bracket of the Siyakhana group is R2225. **(Refer to Table 12. ECDC average monthly spend on food in ZAR)**. Mai Mai Khuthala Pre-School is however an anomaly with their monthly spend being significantly higher than the other members of the lower bracket. It is possible that this is because the Mai Mai Khuthala Pre-School receives monetary funding from a number of different organisations including: Rosebank Rotary, Park on 4th, St Georges Fikelela, Pick ‘n Pay and King David.

**Table 13. Average monthly spend on food per month per child<sup>15</sup>**

| Average monthly spend on food per month per child |     |                                 |     |
|---|-----|---------------------------------|-----|
| Higher bracket                                    |     | Lower bracket                   |     |
| Casita de Chocolate Pre-School                    | R25 | Downtown                        | R27 |
| Kideo   | R47 | Love Peace Educare & Pre-School | R36 |
| Little Eagles Daycare & Pre-School                | R31 | Mai Mai Khuthala Pre-School     | R42 |
| The Little Roses Daycare & Pre-School             | R51 | Silindokuhle                    | R38 |

Taking an average across the higher bracket of the Siyakhana group the average monthly spend on food per month per child is R39. The average spend on food per child per month by the lower bracket of the Siyakhana group is R36. **(Refer to Table 13. Average monthly spend on food per month per child)**. Given the price sensitive nature of the group coupled with their strong bonds which exist between one another, I was interested to see whether the members of the Siyakhana group borrowed or accessed food from one another. The findings showed that none of the members borrowed food or accessed food from one another and they had no desire to combine their purchasing activities in something like bulk purchasing. Although bulk purchasing can enable price discounts the entire group felt that it would not work for three main reasons: differences in quality and quantity, differences in funding and money and logistics. Siyakhana group member five says “this would not be possible as each ECDC keeps to them self. Not all of the ECDCs receive donations and therefore it would be difficult to share across the board. Donations and funding is not the same across the group” (Siyakhana group member five, November 08, 2010). Siyakhana group member eight explains “no it [bulk purchasing] would not work as the ECDCs are too far from one another and the transport of the food would be problematic” (Siyakhana group member eight, December 02, 2010).

### **Meals at the ECDCs**

In this section we will examine the total number of meals served per day, regularity of the meals, variety of foods offered and the size of the portions across the Siyakhana group ECDCs. At all of the ECDCs of the Siyakhana group the children receive two meals per day: breakfast and lunch. All of the ECDCs have formalised meal routines. According to Siyakhana

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<sup>15</sup> For calculation purposes values have been rounded.



group member five, good eating habits are very important in the development of the children as it helps to establish healthy habits in children – from eating right to gaining responsibility (Siyakhana group member five, August 05, 2010). At Love Peace Educare and Pre-School this routine begins with the children lining up in single file (without running). They must then wash their hands at basin in the kitchen and wait in the line to collect their food from the kitchen counter. Once they have collected their food they return to the plastic chairs and tables which are in the main classroom area to eat their food.

Typically breakfast consists of some type of porridge (oats, maize meal or Maltabella) or a cereal such as Kellogg's corn flakes or all bran flakes. The lunch meals at all of the ECDCs are balanced with a starch, vegetables and meat. On average the ECDCs serve meat with the lunches three times a week, serving only vegetables on the remaining two days. The lunches vary depending on the vegetables in season but include meals such as: rice, vegetables and beef; pap and spinach and pumpkin, samp and beans and cabbage; mielie rice, gravy and meat; mielie rice and fish; macaroni, mince and rice pot; rice, beef stew and coleslaw. The majority of the ECDCs also provide an afternoon snack for the children; however it is their own responsibility to bring an afternoon snack. The majority of the ECDCs serve bread and a fruit or yoghurt with a juice for the afternoon snack. During all the visits the Siyakhana group always served the children brown whole-wheat bread.

As part of the requirement to become a registered ECDC a menu must be displayed in a visible location in the ECDC. The entire Siyakhana group do have menus visibly displayed - however they vary in the quality and detail. In general the upper bracket of the group have more formalised menus compared with the lower bracket of the group. The Little Roses Pre-School and Daycare has a comprehensive menu which even has two cycles. These two cycles are designed so that the children do not get tired of the food that is served on a weekly basis. In comparison Mai Mai Khuthala Pre-School (which falls in the lower bracket of the Siyakhana group) says that although they have a menu displayed in the kitchen they do not always follow it exactly. The food which is served depends on what specials there are in the

supermarket. Because the produce from the Siyakhana food garden differs on a weekly basis this also means that when delivered it can add variety to the menu.

Siyakhana group member five also shows an application of nutritional knowledge in her cooking “I know that if you drain the water from the pumpkin you will lose all the nutritional value. You can mix flour into the water and then it is absorbed” (Siyakhana group member five, November 08, 2010). She says that she would like to learn further methods of cooking in order to ensure the maximum nutritional value is derived from the food. This shows us that exposure to the Siyakhana food garden plays a key role in educating with people with methods of sustainable production of food, enhancing nutritional quality and improving food availability and diversity. Siyakhana group member three shares similar sentiments saying that she would like to learn more about different cooking methods for food types in order to increase the variety of the meals served at the ECDC. This is clearly an important need for the entire Siyakhana group with Siyakhana group member four saying that “most of the lettuce that we receive from the garden we do not use in our meals” (Siyakhana group member four, December 14, 2010). Research actually shows that lettuce is rich in lutein and beta-carotene and during the field visits I saw another member using the lettuce as a substitute for spinach.

### **Take home rations**

The entire Siyakhana group said that if there is food left over at the end of the day this is shared with the children and the teachers as take home rations. The group also highlighted that if they received a large quantity of produce from the Siyakhana food garden this would also be shared amongst the children, teachers and parents. Given the low income communities in which the Siyakhana group operate, take home rations can make a huge difference to a child whose parents are unemployed and the household does not have access to food. Globally home rations have also been recognised for the role that they can play in keeping children in school.

This chapter has looked at the resource availability of the Siyakhana group and how this affects the different members of the group in the running of their ECDCs. Based on infrastructure and urban form a distinction was made between the higher and lower bracket of the Siyakhana group. The findings from the ECDC size, pupil teacher ratios and pupil staff ratios further confirmed these divisions with the lower bracket of the group having smaller ECDCs and higher pupil teacher ratios and pupil staff ratios. When looking at funding and economic participation the chapter highlighted that the majority of the ECDCs in the lower bracket are not registered with the Department of Education which makes it very difficult for them to obtain any funding or support. A detailed discussion on nutrition and feeding at the ECDCs also took place highlighting the fact that the majority of food which is purchased for the ECDCs is purchased from local shops and price is the overriding factor in the choice of where to source this food from. Through the analysis of these various aspects of the ECDCs I have provided an account of the complex and time consuming activities involved in running an ECDC. In the next chapter we will explore the perceptions and expectations of the Siyakhana group and how these affect their involvement in the initiative.

## **Chapter 7: Siyakhana group expectations and perceived benefits**

Up to now the discussion has focused on what the Siyakhana initiative has achieved over the past six years, how the Siyakhana group fit into these achievements and the broader initiative and a detailed understanding of the Siyakhana group EDC facilities. This chapter looks at the group's expectations and perceived benefits of their involvement in the initiative and compares it to the actual benefits that have been realised. The findings of the research indicate that there are two main ways in which the Siyakhana group benefit from their involvement in the Siyakhana initiative:

1. Supplementary food; and
2. "Living laboratory" and enabling environment.

Whilst the Siyakhana group are the focus of this chapter a brief discussion of the benefits pertaining to the gardeners (as secondary beneficiaries) will also be facilitated. When analysing the supplementary food which is provided to both the gardeners and the EDCs I look at the frequency of the deliveries, the quantity, quality and variety of the food. It is beyond the scope of this research to determine the extent to which the food from the Siyakhana food garden improves the nutritional status of children at the EDCs. In looking at the second main benefit of the food garden to the beneficiaries ("living laboratory" and enabling environment") I explore the benefit of having access to an open space and teaching environment which is offered by the Siyakhana initiative and secondly the implementation of food gardens by the Siyakhana group. The implementation or initiation of food gardens by the Siyakhana group is used as a measure of the impact of the courses which the group have attended and the skills they have obtained through their participation in the activities of the garden.

In order to quantify the benefits of the Siyakhana initiative I perform an analysis of the production costs of the food and I use the cost of the training courses to determine a financial value of a particular set of skills and capabilities which the Siyakhana group

received. By performing these quantifications it becomes evident that for a small scale urban agriculture project such as the Siyakhana food garden, the cost of producing food can actually be very high. This reiterates the argument of this research that the value of urban food gardens cannot simply be measured in terms of the economic value of the outputs produced. Rather the value generated by the urban food garden is in actual fact much more than the financial value of the food grown, and more than the financial value of a range of other non-economic capabilities and processes (for this particular discussion, training and skills transfer).

### **Supplementary food**

Currently the Siyakhana group do not give any formal or mandatory financial contribution to the Siyakhana initiative. In the beginning of the project the Siyakhana group used to contribute R100 per month however this became problematic and the group “admitted that they could not always pay the R100 per month into the project ‘kitty’, and even when they did, lack of transparency about financial accounting meant they were not convinced that the money went towards the gardeners’ salaries” (Chinemana, 2006: 12). Thus since the Siyakhana group have been involved with the initiative they only gave a monetary contribution in the first year of the project. As beneficiaries of the food garden the Siyakhana group have never paid for the food which is received from the garden or any training courses related to permaculture and urban food gardening which they have attended.

Since the appointment of the Hlangi Vundla (stakeholder engagement manager) and the monthly Siyakhana meetings, he has encouraged the Siyakhana group to think of meaningful ways in which they can contribute towards the Siyakhana initiative. Hlangi Vundla has explained to the group that these do not have to be monetary contributions, but rather he would like the Siyakhana group to conceptualise themselves as joint partners who contribute in some way to the initiative. In December 2010 however, Kideo and The Little Roses Daycare and Pre-School (both are in the higher bracket of the Siyakhana group) gave money to the gardeners who delivered the food to the ECDC. The money was to be shared

with the other staff and used as a contribution to the annual Siyakhana Christmas lunch. The supplementary food and training to the Siyakhana community and the wider Bezuidenhout Valley community provided by the Siyakhana initiative at no cost shows their commitment towards improving the health, social and economic status of inner city communities.

Despite not having to pay for the supplementary food, if the food from the Siyakhana food garden is to make a real difference to the ECDCs it needs to meet their expectations and if this is not possible the group's expectations need to be re-aligned. According to Sachs (2010), the Siyakhana group "have had high expectations over the years" (Sachs, 2010: 62). "They believed that Siyakhana would provide them with a regular and sizeable supply of fresh produce. They thought that supplying food would no longer be a stress for them" (Sachs, 2010: 62). Based on these high expectations I was interested in analysing the frequency and consistency of the food which is delivered to the ECDCs and the overall satisfaction level of the Siyakhana group.

### **Past experiences of the Siyakhana group**

Past research coupled with the experience of the Siyakhana group and the knowledge of the gardeners and the stakeholder engagement manager, shows that over the past two years the food from the Siyakhana food garden was not delivered to the Siyakhana group on a regular basis. According to Dawson the food was delivered sporadically with weeks or even months passing with no fresh produce being delivered to the ECDCs and NGOs (Dawson, 2008: 25). Hlangi Vundla said that during 2009 a similar pattern occurred with food only being delivered once in the whole year to the Siyakhana group. No food was delivered to the Siyakhana group up until September 2010. This is further confirmed by the Siyakhana group members. Siyakhana group member six reports that in the beginning of the year (2010) they did not receive anything "I thought that it was because there was no food in the garden" (Siyakhana group member six, December 08, 2010). Siyakhana group member seven also says that in the beginning of the year she did not receive any produce. Siyakhana group member eight re-emphasises the lack of produce that was shared with the ECDCs, saying that in the past they would receive food from the garden every month or so.

According to Siyakhana group member two, in 2009 the deliveries were sporadic and the food was not received on a weekly basis. This is further backed up by Patrick Khanye (full time gardener) who reported that “in the past it [the delivery of produce to the ECDCs] was not every week” (Khanye, December 07, 2010).

The research demonstrates the reasons for the Siyakhana group not receiving the food was not as a result of the poor yield in the garden, but rather it was linked to resource constraints within the Siyakhana initiative. Although the permaculture activities for 2010 were adversely affected by weather conditions (such as black frost and excessive rain), pests (such as rats and fruit flies) and soil conditions, this is expected when engaging in organic farming. These factors did not however reduce the yield of the garden so dramatically that there was no food to be shared with the Siyakhana group. Over time Mandla Tshabalala has learnt to make use of techniques of permaculture which use organic principles and mimic the diversity of natural ecologies. Mandla Tshabalala says: “we don’t have a problem with pests because the garden is so diverse, it functions like a community, and the more you increase the different species of plants, the fewer pests there are” (Afronline, 2011).

Despite the fact that no food was shared with the Siyakhana group Mandla Tshabalala (garden manager) reported that for various quarters of the year the produce was good. A discrepancy exists between the food that was reported to be shared with the Siyakhana group and that which they received. It was reported by Mandla Tshabalala that during quarter one of 2010 (January to March), “the produce was good as it supplied both the intended beneficiaries and the staff also ate from it. Both the NGO’s affiliated to us/staff enjoyed the maize from January to March. The beans were also distributed likewise” (Tshabalala, 2010: 3). The discrepancy lies with the Siyakhana group who all stated that they did not receive any produce from the garden during this period.

A similar trend was seen for quarter two of 2010 (April to June) and no deliveries took place. Petros Mcnumu (full time gardener) explained that there was insufficient produce to distribute during these months as the garden was very dry and there was a shortage of

water. Although there is noticeably less produce in the garden during the winter months, all of the members of the Siyakhana group understood the reasons for the lower yield, and therefore diluted their expectations for the quantity of food delivered in the winter months. John Mxumalo (full time gardener) illustrates these natural fluctuations in the volume of produce available in the garden “I have not been with the project long enough to comment [on the differences in the type or volume of food delivered over the past year] but it is based on seasonality” (Mxumalo, December 07, 2010). It should be noted however that the Siyakhana food garden team is committed to making use of all the produce and do not waste anything that has grown in the garden. The small leaves of vegetables such as spinach and cabbage that are not suitable for cooking are used to make vegetable salts. Furthermore vegetables leaves which are slightly blemished and cannot be distributed as “fresh” produce to the Siyakhana group are shredded for the gardeners to use in stir-fry dishes or steamed for relish. It is understandable that in the winter months there may be insufficient food to be shared with the Siyakhana group. This is acceptable; however it needs to be communicated with the group to avoid false expectations.

**Figure 11. Differences in the food garden between summer and winter months (observed during 2010)**



Although we have discussed the factors which may affect the yield of the garden such as weather, water availability and pests the primary reason for the food not being delivered to the Siyakhana group was due to a lack of resources in the food garden. With the expansion of the garden, the gardeners became increasingly busy with the management of the day to



day activities and the garden manager did not have the time to deliver the produce to the ECDCs on a regular basis. Mandla Tshabalala (garden manager) used to be responsible for the distribution of the produce (as he is the only gardener with a drivers licence) however he works in the Siyakhana food garden for two weeks of the month and then works at his farm for the remaining two weeks. This obviously caused problems in the logistics of the delivery of the food, coupled with the constraint that none of the gardeners have drivers' licences. This was further aggravated by the fact that the Siyakhana bakkie was used for a multitude of purposes relating to the Siyakhana initiative and therefore was not always available for the delivery of the produce.

### **Delivery and distribution of the produce**

The turning point in the delivery of the produce to the ECDCs was the appointment of the stakeholder engagement manager in August 2010. Hlangi Vundla has played a central role in distributing garden fresh foods to the ECDCs (SIEHFS, 2011: 11). Since Hlangi Vundla's appointment there has been a dramatic improvement in the frequency and consistency of the deliveries to the ECDCs of the Siyakhana group. Coupled with this improvement is the recognition by the Siyakhana initiative of a major lesson learnt in the distribution of the produce - the importance of having a vehicle available to deliver the food to the ECDCs. To this end, Patrick Khanye (full time gardener) reports that a major plan of the garden is for all of the gardeners to obtain their driver's licences so that they can visit the ECDCs on a more regular basis.

This will give the gardeners the ability to visit the ECDCs in the week (work at the garden permitting) in addition to the weekly deliveries of the food. In 2011 two of the gardeners will begin driving lessons (which will be paid for by the Siyakhana initiative). This shows the Siyakhana initiative's commitment towards on-going training and skills transfer amongst the staff. When I discussed this prospect with the two gardeners, both of them said that they were waiting to understand from Hlangi Vundla (stakeholder engagement manager) what they had to do. Sarah Mashala (full time gardener) will be given the opportunity to get her driver's licence after the first two gardeners have passed their licences. Sarah Mashala says

that “It would be good if all of the gardeners had their own drivers licence - because in the past we were reliant on Mandla and could only do the deliveries when Mandla was available to take us” (Mashala, December 07, 2010). “I am interested but I am also scared” (Mashala, December 07, 2010).

Currently the process for the delivery of produce to the ECDCs is managed by the stakeholder engagement manager (Hlangi Vundla). Hlangi Vundla drives the Siyakhana bakkie and two gardeners accompany him in the delivery of the produce to the ECDCs. The Siyakhana bakkie is now only used for the food deliveries, meetings and to pick up stock for the Siyakhana food garden. As a result of the past problems relating to the delivery of the food the Siyakhana group and initiative have come to an agreement that should Hlangi Vundla have a problem and be unable to deliver the produce to the ECDCs, Siyakhana group member four will be called upon to help as she has her own vehicle. Since September 2010 the ECDCs received fresh food from the garden on a weekly basis. Siyakhana group member one says that this year the project has been more "serious" about the deliveries (Siyakhana group member one, December 14, 2010). The deliveries stopped in the middle of December once Hlangi Vundla had confirmed with the Siyakhana group the date the ECDCs were closing for the Christmas period.

In preparation for the deliveries to the ECDCs the produce from the garden is packed into black plastic bags by the gardeners. The food is harvested on a Monday to ensure that the produce is as fresh as possible when it is delivered to the ECDCs (on the Tuesday). It was jointly decided by the Siyakhana group and Hlangi Vundla that the best day for the deliveries was a Tuesday. The day of delivery is an important consideration for the ECDCs to get the maximum benefit out of the food. In the past when the food was delivered to the ECDCs the delivery days changed but the food was mostly delivered on a Friday. According to Patrick Khanye (full time gardener) the food is delivered on a “different day” to when we used to deliver last year (Khanye, December 07, 2010).

The day and time of the deliveries is set in stone and does not change. This assists the Siyakhana group with the planning of their meals at the ECDCs as they know that they will receive the supplementary food on the same day and time every week. Siyakhana group member one explains that in the past the deliveries were received sporadically and the food was delivered on a Friday. Friday deliveries were unsuitable for the ECDCs as they are closed over the weekends. This meant that the food from the garden was often just left in the plastic packets over the weekend to rot. Siyakhana group member two shares a similar sentiment “The food used to be delivered on a Friday which was no use as we close early on a Friday and therefore there would be no one around to receive the food” (Siyakhana group member two, December 08, 2010). Siyakhana group member eight says that “Tuesday is a fine day and the time that the food is delivered is suitable” (Siyakhana group member eight, December 02, 2010). The food is delivered directly to all of the ECDCs except for Silindokuhle which is based in Orange Farm. Silindokuhle and Love Peace Educare and Pre-School have an agreement that the food is kept at Love Peace Educare and Pre-School and is picked up when the principal of Silindokuhle comes to town for her weekly shopping (this is normally the next day).

In line with the sustainable approach of the project the Siyakhana initiative is in the process of purchasing hessian sacks for the distribution of the produce. This way the sacks will be able to be recycled and reused. Once the food has been packed into the black plastic bags it is loaded onto the back of the Siyakhana bakkie. On average there are about two black bags of produce which are given to each of the ECDCs on a weekly basis. The standard food parcel received by each member of the Siyakhana group on a weekly basis (subject to seasonal fluctuations) from the food garden consists of ten bunches of spinach, two kilograms of onions, eight lettuce heads, two kilograms of tomatoes, eight cabbage heads; and one seasonal vegetable (pumpkin). Dumisani Madumo (full time gardener) reiterates the increase in produce received by the ECDCs: “I think that we take the ECDCs much more food than we used to in the past” (Madumo, December 07, 2010). The delivery takes place between 09h00 and 10h00 on a Tuesday and the total delivery time to make all the deliveries to the Siyakhana group takes on average one and a half hours. Two of the

gardeners accompany Hlangi Vundla on the deliveries and physically take the food into the ECDCs. Patrick Khanye (full time gardener) says that he normally just drops off the food and leaves because the teachers are “busy with their lessons” (Khanye, December 07, 2010). All the gardeners are now familiar with the route and location of all the ECDCs and similarly all the Siyakhana group members know the gardeners on a first name basis.

**Figure 12. Siyakhana bakkie with bags of produce for delivery to the ECDCs**



The research shows that the Siyakhana group are much happier with the state of the food deliveries (including the time and frequency) since the stakeholder engagement manager has been involved. Siyakhana group members five and six both emphasised that the improvement has been brought about by the introduction of the stakeholder engagement manager to the project. Siyakhana group member six says that “there has been an improvement” (Siyakhana group member six, December 08, 2010). She explains that in the beginning half of the year [2010] the food was not delivered on a weekly basis, however since Hlangi Vundla (stakeholder engagement manager) has joined; the food is delivered every Tuesday. Siyakhana group member three similarly says that since September the deliveries have been consistent and that there is a huge improvement “I am happy” (Siyakhana group member three, December 02, 2010). This is reiterated by Siyakhana group member four who reports that there is now assurance that “every Tuesday **no matter what** we will receive vegetables such as onions and spinach” (Siyakhana group member four, December 14, 2010). With the improved deliveries, there has also been renewed

commitment from the members of the Siyakhana group to the initiative. Siyakhana group member one says that she is going to make sure that she puts more time aside to increase her participation and involvement with the initiative.

Interestingly both Siyakhana group members five and eight who are linked to the Food Bank say that they have only received food once or twice from the Food Bank. In relation to the service offered by the Food Bank, Siyakhana group member eight says “the frequency and consistency of the deliveries are poor and you can only get the food provided you are able to go and fetch the food yourself” (Siyakhana group member eight, December 02, 2010). Siyakhana group member five also says that whilst she is a member of the Food Bank she has never received food from them. The Food Bank is an organisation which was formed to eradicate hunger and food insecurity (Food Bank South Africa (FBSA), 2010). It is a member of the Global Foodbanking Network and acts on behalf of about one thousand three hundred agencies, FBSA sources good quality food – mainly donated – from food retailers, manufacturers, wholesalers, and farmers. The food is then sorted and distributed to its agencies, which in turn provide the food to the people most in need. This provides a real life example of the challenges in the distribution of food.

**Figure 13. Produce from the Siyakhana food garden being shared with Silindokuhle**



## **Quantifying the amount of produce shared with the beneficiaries**

Given the marked improvement in the delivery of the produce to the ECDCs I was interested in establishing exactly how much and what type of produce the Siyakhana group receive and how many meals the food can be used for. The food which is produced in the garden is primarily shared with the Siyakhana group and the gardeners. In both cases the food which is shared is intended as a supplement, and needs to be accompanied by bought food. The entire Siyakhana group receive the same amount and type of produce. Dumisani Madumo (full time gardener) explains that the food is always divided equally amongst the ECDCs. He also says that if there is insufficient quality and quantity to give the ECDCs the exact food then it is not shared with the ECDCs and it will rather be shared amongst the gardeners. Sarah Mashala (full time gardener) maintains a register of the food which is distributed to the Siyakhana group and full time gardeners.

For the five largest ECDCs in the Siyakhana group (Mai Mai Khuthala Pre-School – 106, Casita de Chocolate Pre-School - 100, The Little Roses Daycare and Pre-School – 94, Kideo - 85 and Little Eagles Daycare and Pre-School - 80) the food which is received from the garden provides on average one to two meals. For the smaller three ECDCs (Love Peace Educare and Pre-School - 50, Silindokuhle – 42 and Downtown - 37) the food from the garden provides on average three to four meals. By “meals” I mean that the produce from the garden (which is fresh fruits, herbs and vegetables) is supplemented with staple foods and meat. The entire Siyakhana group said that the food which is delivered from the garden is primarily used in the preparation of the lunch meal for the children. Six out of the eight Siyakhana group members said that all of the produce which is delivered from the Siyakhana food garden is edible, with two members reporting that two to five percent of the produce that is delivered to the ECDCs, is not of a suitable quality to be eaten. Siyakhana group member eight says that sometimes the vegetables are not fresh enough and the fruit is overripe. Of all of the ECDCs this one spends the greatest amount per child on food per month and therefore it is possible that the Siyakhana group member has very high expectations.

Other Siyakhana members which stated that all of the produce is edible emphasised the improvements in the diversity and quality of the produce received from the food garden. Siyakhana group member seven says there “is an improvement in the quality of the produce”. She also specifically said how different the produce, which is received from the garden is to that which she buys from the shops. The spinach is “very nice” it tastes different (Siyakhana group member seven, January 19, 2011). Siyakhana group member two says “the quality has improved” (Siyakhana group member two, December 02, 2010) and Siyakhana group member one felt that “there is more variety” (Siyakhana group member one, December 14, 2010).

In terms of the food which is shared with the gardeners: this is on average provided to all eight full time gardeners on a weekly basis, (depending on the availability of food in the garden). The gardeners receive sufficient for self-consumption; however the research did not determine how many meals “self-consumption” refers to. Sarah Mashala (full time gardener) explains that the food she receives from the garden “is sufficient for self-consumption and to share with my neighbour” (Mashala, December 07, 2010). Patrick Khanye (full time gardener) says that he receives “a little bit” and that he buys meat in the week to supplement his meals (Khanye, December 07, 2010). Dumisani Madumo (full time gardener) says we get “just as much as we need” (Madumo, December 07, 2010).

There is a clear trend across both the Siyakhana group and gardeners as beneficiaries of the food that they share the produce from the Siyakhana food garden with neighbours, friends or people who are struggling within the community. It is thus not solely the economic value of the produce per say, which is of benefit to the Siyakhana group and gardeners, but rather the way in which they are able to share the food with their wider communities. It is this opportunity which enables the Siyakhana group and gardeners towards contributing to improving availability and accessibility of nutritious sustainably produced food to a much wider community (SIEHFS, 2011: 4). All of the Siyakhana group use this food to feed the children at the ECDCs and also share it amongst the teachers and those children whose parents are struggling and/or sick. Siyakhana group member three explains that “the food is

given to the children, parents and those staff which are sickly” (Siyakhana group member three, December 02, 2010). Siyakhana group member five explains to me that many of the parents of the children who attend her ECDC have low disposable income and it is very important that the children also have access to nutritional food when they are at home as well as at the ECDC. “There are normally no leftovers, but if there are I share them with the parents who are struggling, have babies and those staff who are sick and have multiple dependents” (Siyakhana group member five, November 08, 2010). Similarly Siyakhana group member four explains to me that many of the children’s parents are informal traders and have difficulty in providing the children with fresh and nutritious produce and thus she shares the food with those children’s parents. Siyakhana group member seven explains that she sometimes gives food to the parents (it is normally just a “small bunch”) so that they can have a taste of the produce from the garden (Siyakhana group member seven, January 19, 2011).

From discussions with the gardeners the food which they receive from the food garden is also shared with their wider community. John Mxumalo (full time gardener) explains that “I cook it [the produce from the garden] for myself and also share it with those who I know are poor and struggling in my area” (Mxumalo, December 07, 2010). Patrick Khanye similarly says that he also cooks the food for himself and shares it with his friends and neighbours who he knows are struggling. Another direct way in which the community benefits from the food produced from the Siyakhana food garden (apart from the sharing we have seen by the Siyakhana group and gardeners) is the ability to buy surplus produce from the garden if it is available. This is monitored closely by Sarah Mashala (full time gardener) to ensure transparency and accountability. The money is used to buy airtime for the garden manager’s cellphone and for minor inputs that are required in the garden. It therefore becomes clear that it is the yield that is produced in the garden which functions as a reward which encourages, maintains and/or replicates the system that generated the yield, rather than the monetary value of the occasional sales of the produce (Holmgren, 2007: 12).



## Diversity of organic produce

According to Mandla Tshabalala (garden manager) in order to ensure that the Siyakhana group receive the most suitable and nutritious food for the children at their ECDCs, they “give us a list of what the children have to eat for good nutrition and then we plant as much of it as we can” (Afronline, 2011). However this has not been easy and in the past the Siyakhana food garden was not always able to respond to the demands of the Siyakhana group due to the poor quality and predominantly clay based soil of the garden. Spinach is the most common type of produce distributed to the Siyakhana group due to its longer life span of 8 months compared with the other vegetables. Siyakhana group member five says that “we mostly receive spinach from the garden” (Siyakhana group member five, November 08, 2010). Siyakhana group member seven says to me that a wide variety of produce is received from the garden and in the past the ECDC has received “spinach, onions, Chinese cabbage, lettuce, beetroot, carrots, and peaches” (Siyakhana group member seven, January 17, 2011).

**Table 14. Most frequently delivered produce for distribution to the Siyakhana group for 2010 (not an exhaustive list as there is a huge variety of herbs in the garden as well)**

|  |
|--|
| <b>Quarter one: January to March</b>   |
| Swiss chard, onions, cabbage: green and red types, green lettuce, red lettuce, watermelons, butter beans, scarlet beans and maize. |
| <b>Quarter two: April to June</b>  |
| Broccoli, red and green cabbages, onions, spinach and broad beans.   |
| <b>Quarter three: July to September</b>  |
| Red and green lettuce, kale, red and green cabbages, cauliflowers, onions and spinach.   |
| <b>Quarter four: October to December</b>   |
| Red and green cabbages, onions, yellow pumpkins, butternuts, sugar beans and spinach.  |

**Figure 14. Lettuce, cabbages and spinach (some of the most commonly distributed produce) growing at the Siyakhana food garden**



A key issue which was brought up by the majority of the Siyakhana group is that it would be beneficial if they could receive more root vegetables. Siyakhana group member four says that “we often receive lettuce which is problematic as it is difficult to make a meal for the children with lettuce. We do not have enough money to make fresh salads for the children and it is not good in the stews and pots” (Siyakhana group member four, December 14, 2011). Siyakhana group member five also says to me that she would like there to be a greater focus on the production of root vegetables. “I know that these vegetables are a particularly important source of minerals and salts and therefore it would be beneficial to the ECDC if we could receive more of these types of foods. I would also like to receive a greater variety of legumes and other types of vegetables such as cauliflower and leaf vegetables” (Siyakhana group member five, November 08, 2010).

Recently the stakeholder engagement manager (Hlangi Vundla) has introduced mushrooms into the garden. These were introduced after research showed that many children have very little protein in their diets. Hlangi Vundla says that “mushrooms are a better source of protein than meat. It takes 16 hours for mushrooms to be converted to protein, compared to chicken’s 28 hours” (TasteMag, 2011). The introduction of mushrooms is also closely linked to the needs and desires of the Siyakhana group. Half of the Siyakhana group told me that they were particularly interested in mushroom workshops. During a field visit to the Siyakhana food garden in January 2011, a consultant from Zimbabwe was assisting Mandla Tshabalala (garden manager) in the design of mushroom cultivation within the garden

(purchasing Wendy houses and materials required). Once the mushroom cultivation is established in the Siyakhana food garden, it will be rolled out within the ECDCs. This illustrates that the Siyakhana initiative understands the desires and wants of the Siyakhana group and has developed an appropriate response in the form of not only the produce, but also accompanied by training.

According to Mandla Tshabalala (garden manager) the soil conditions have improved considerably (largely due to the dressing of the soil with grass cutting and wood chips) enabling the garden to significantly diversify the produce which is grown in the garden. The first crop of carrots, yellow pumpkin and butternut was planted in quarter four of 2010 (October to December) which will be ready for harvesting in 2011. The garden had attempted to grow pumpkins in the first quarter of 2010 however this did not yield any produce as the rain affected their growth and they rotted prior to being harvested. A valuable lesson has been learnt however and the pumpkin crop for harvesting in 2011 has been trellised to prevent such losses. Despite these losses however Patrick Khanye (full time gardener) says that the lessons are valuable and “I continually learn and learn about better practices all the time. This is demonstrated in the flourishing of the garden” (Khanye, December 07, 2010).

George Mahlombe (full time gardener) who has been employed in the garden for the past three years reports “the garden has grown since I was first involved in the project and there is a greater variety of produce” (Mahlombe, December 07, 2010). The Siyakhana food garden currently has about one hundred and six fruit and nut trees planted in the orchard space. The orchards have a mix of fruit and nut trees including almond, apple, apricot, figs, mulberry, naartjie, olives, peach, pear, pecan nut and plums. The planting of the orchard is a major development to the garden. “The other major change is the planting and the growth of the orchard. This orchard has grown and is now better established and flourishing” (Madumo, December 07, 2010).

In addition to the planting of the first underground crop, potatoes have also been planted which will be distributed to the beneficiaries in 2011 should the yield be successful. This is

encouraging and demonstrates that the Siyakhana initiative remains committed to the Siyakhana group and internalises and acts upon the information provided by the group in order to continue making the garden a more productive and beneficial space for all. Other value-adds which the Siyakhana food garden provides to the group are herb and vegetable salts and herbal creams. Sarah Mashala (full time gardener) reports that the knowledge she has gained and the health benefits from the garden are enormous. She explained to me “when I first started working in the garden I had scars all over my face, Mandla [garden manager] and Themba [Mandla’s wife], prepared herb creams for me which have helped so much that today all the scars have nearly disappeared” (Mashala, December 07, 2010).

The Siyakhana herb garden stocks a wide variety of herbs, such as rosemary, oregano, sage, lavender and Echinacea, that can be used for affordable and renewable natural healthcare (Afronline, 2011). The herb salts are an innovative solution developed by the Siyakhana initiative to supplement the diets of the children and teachers at the ECDCs. The herb salt mixture consists of eighty percent herb and twenty percent salt. The Siyakhana initiative found that in the past the Siyakhana group did not eat the fresh herbs (normally celery and parsley) provided to them. During the first quarter of the year (January-March 2010) a large amount of spinach and cabbage salts were produced, as once these plants go to seed the small leaves are not suitable for the food deliveries to the Siyakhana group. The majority of the herbs and vegetables such as spinach and cabbage are dried during the months of January to March as herbal plants are at their peak. The herbs or vegetables are harvested, washed and dried in the drying section or green house. The drying process involves turning the produce on a regular basis to ensure that no mould grows on the produce. A new larger green house is currently in the process of being built which will enable a greater quantity of herbs and vegetables to be dried in the future.

Mandla Tshabalala (garden manager) reported that the vegetable and herb salts are not supplied to the Siyakhana group on a frequent basis as they use them in their individual capacity rather than for the children which attend the ECDCs. The research shows that the entire Siyakhana group understands how and what the herb and vegetable salts should be used for. Siyakhana group member five reports that “I love cooking with these and include them in much of my cooking”. “It is delicious” and adds large amounts of nutrients to the

children’s food (Siyakhana group member five, November 08, 2010). Siyakhana group member seven tells me that “when I receive them [herb salts] I sprinkle them on the children’s food” (Siyakhana group member seven, January 19, 2011). All the gardeners who were interviewed said that herb salts were given to the Siyakhana group depending on the availability of herbs in the garden. This is coupled by the fact that the making of the herb and vegetable salts is a time and resource intensive exercise. Siyakhana group member seven said she understands that the process is time consuming and therefore it is not possible to receive these herb salts on a weekly basis. Whilst the above factors have been taken into consideration the majority of the Siyakhana group reported that they have not received any herb salts with the deliveries in a long time. Siyakhana group member eight said “we used to receive herb salts but we have not received them for a long time” (Siyakhana group member eight, December 02, 2010). Similarly Siyakhana group member one commented that “we used to receive herb salts but we have not received these for the past two deliveries” (Siyakhana group member one, December 14, 2010).

#### **Figure 15. Herb salts**

**Step 1: Parsley drying in the open (3 day process); Step 2: Parsley being “pulverised” using a pestle and mortar into an herb salt; Step 3: Final packaged herb salts.**



This section has explored the major benefits that are derived from the receipt of the supplementary food from the food garden. The two main beneficiaries which it has focused on is the Siyakhana group and the gardeners. It has highlighted the poor delivery of the produce to the Siyakhana group from January-August 2010 but also showed the huge improvement and turn-around in the delivery of the produce that the initiative has

achieved. The Siyakhana group now receive food from the garden on a weekly basis. An important aspect of the supplementary food which was explored for both beneficiaries was that they are able to share it with their wider community and particularly those members who are struggling. A discussion of the type and quantity of food which is received from the garden took place. The monetary value of the produce provided by the food garden to the beneficiaries was calculated. The results highlighted that one cannot judge a food garden on simply the amount of produce yielded, but rather there is a need to interrogate the non-economic benefits if one is to quantify the real, total value of such initiatives. In conjunction with this discussion it was highlighted that the Siyakhana initiative is committed towards providing healthy and nutritious food for the EDCs (for the maximum benefit of the children) and they are constantly working towards a diversification of produce and products from the garden.

### **Monetary value of the Siyakhana produce**

Whilst the rationale of this research was to address the non-economic dimensions of urban agriculture, it has been noted that what could be regarded as economic issues (operating costs of the garden) are also intricately linked to the long-term financial viability of the project. In light of these issues of sustainability the objective of this section of the research is to establish the financial value of the contribution of the Siyakhana food garden (in terms of the supplementary food) to the beneficiaries. When I refer to the beneficiaries it consists of the Siyakhana group and their respective eight EDCs and the eight full time gardeners. In order to determine the financial value of the contribution by the food garden a comparison is made based on a selected basket of produce from a street vendor, a local shop and a large supermarket. The selected basket of produce consists of the average quantity and type of produce which the Siyakhana group receive from the Siyakhana food garden on a weekly basis.

Standard basket of produce:

- Ten bunches of spinach;
- Two kilograms of onions;
- Ten lettuce heads;
- Two kilograms of tomatoes;
- Ten cabbage heads; and
- One seasonal vegetable (pumpkin).

Fruits and nuts have not been included in this standard basket of produce, as the orchard (one hundred and six fruit and nut trees) is young and the yield is not yet at full capacity. It is expected that within two years the full nutritional value will be shared with the beneficiaries.

**Table 15. Cost comparison of the value of a standard basket of produce<sup>16</sup>**

| <b>Produce</b>                  | <b>S – Street vendor</b> | <b>L – Local shop</b> | <b>SP – Supermarket</b> |
|---------------------------------|--------------------------|-----------------------|-------------------------|
| Spinach (10)                    | R50                      | R60                   | R90                     |
| Onions (2kg)                    | R12                      | R12                   | R16                     |
| Lettuce (10)                    | R50                      | R60                   | R60                     |
| Tomatoes (2kg)                  | R16                      | R20                   | R24                     |
| Cabbage head (10)               | R50                      | R60                   | R90                     |
| Seasonal vegetable              | R14                      | R15                   | R23                     |
| <b>Weekly value per basket</b>  | <b>R192</b>              | <b>R227</b>           | <b>R303</b>             |
| <b>Annual value for 8 ECDCs</b> | <b>R79 872</b>           | <b>R94 432</b>        | <b>R126 048</b>         |

Based on the cost comparison of the value of a standard basket of produce between the street vendor, local shop and supermarket the cheapest option is the street vendor. On this standard basket of produce, the street vendor is eighteen percent less than the local shop and fifty eight percent less than the supermarket. Interestingly this data is another example

<sup>16</sup> For calculation purposes values have been rounded.

which disproves the literature that argues supermarkets and formalised channels offered better prices than the informal economy. The data obtained from the sourcing of food by the Siyakhana group tells us that the majority of the group purchase fresh fruit and vegetables from local shops. Thus the local shop value of the basket of goods will be the benchmark against which to measure the contribution of the food garden to the Siyakhana group. Weekly the contribution of the food garden to the Siyakhana group is R1816, which works out to R7264 per month. (This calculation is based on fifty two weeks – although the ECDCs close for two weeks in December they are given additional food for the Christmas period). Annualised this equates to a contribution of R160 per child towards supplementing the food for six hundred children across eight ECDCs. The monetary value of the supplementary food only takes into consideration actual food costs, it does not quantify the non-economic benefits associated with the Siyakhana groups involvement in the larger initiative. The non-economic benefits offered to the Siyakhana group is the practical learning environment provided by the food garden, training, awareness and capacity building which will be addressed in greater detail in the next section.

From a sustainability point of view there is a further need to establish the operating costs of the garden on an annual basis. The operating costs for 2011 are R515 800 which has been generously funded by ABSA and The Woolworths Foundation. This equates to a cost of R863 per child, which initially appears to be extremely high. However it does not take into account the following six factors which cannot be financially quantified but are extremely important. These factors are as follows:

- The food garden has created employment for eight full time gardeners who receive a monthly salary. The gardeners also receive produce for self-consumption and to support their families on a weekly basis;
- The food garden provides additional food through the ECDCs to the wider community and in particular those suffering from HIV/AIDS;



- The food garden supplies organic produce which has a higher nutritional value for the children than commercially grown food and demands a higher price in the market (this has not been factored into the cost of the produce);
- By virtue of the organic nature of the operation no money within the budget is spent on fertilisers, insecticides or pesticides. The permaculture approach adopted by the food garden makes use of an interdisciplinary and systems thinking approach towards long term sustainable urban agriculture. Thus the inputs are much lower than in traditional agriculture. Despite these low inputs, the garden is still very small and therefore is unable to benefit from economies of scale experienced by larger commercial farms;
- The food garden has created a green space. This has assisted the municipality in their land management. The municipal lawn and tree cuttings are all converted via huge organic compost mounds into the food garden. This is a huge cost saving for the municipality; and
- Finally the non-economic benefits of the food garden in terms of enhancing capabilities, providing an ecological learning environment and the ability for training and skills transfer provide immense value to the initiative aside from the produce. The non-economic benefits offered by the food garden are quantified later in the research when looking at the training and skills transfer opportunities which the garden has provided the beneficiaries with.

### **Siyakhana food garden as “living laboratory” and enabling environment**

The second main benefit apart from the supplementary food which is received is the Siyakhana group’s access for both themselves and the children who attend their ECDCs to the Siyakhana “living laboratory”. Thus in addition to improving the food security of the Siyakhana group and the children which attend there ECDCs there is also a very important educational, relational and capacity building role provided by the food garden. Based on the fact that this research is performed within the community development paradigm, this part of the chapter acknowledges the need for interrogating the role which urban agriculture can play in building capabilities for development. I investigated the extent to which the

Siyakhana group took advantage of the living laboratory finding that only half of the Siyakhana group actually visited the food garden in 2010. I also look at whether the training and skills transfer on permaculture and food gardens has capacitated the Siyakhana group to make behaviour changes. Two factors are looked at: first the extent of implementation of food gardens and second the group's role in health promotion within the wider community.

### **Living laboratory**

One of the expectations of the Siyakhana initiative is that the Siyakhana group bring the children of the ECDCs to the garden to enable skills transfer and a shared and collaborative learning approach. In this section I explore the extent to which the Siyakhana group have visited the food garden over the past year and how these visits have benefited them. The expectation coupled with the engagement of the Siyakhana group at the food garden is key to developing and maintaining a strong bond between the two groups. I also consider other direct spin-offs from the Siyakhana initiative which includes training and networking opportunities for the group. To this end I specifically look at how many members of the Siyakhana group engage in urban agriculture at their homes or ECDCs. The purpose of this section is to enable an understanding of how the Siyakhana group engage with the food garden and how they share these experiences with their larger communities.

Each Siyakhana group member is given R500 per year by the Siyakhana initiative to enable them to bring the children to visit the food garden. The funds are deposited into the Siyakhana group bank account which is managed by Siyakhana group member three. During 2009 Siyakhana group member three monitored the money that was allocated to the ECDCs to visit the garden and said that she ensured that the money was given to those schools which visited the garden. For the year 2010 the Siyakhana initiative credited R1500 to the Siyakhana bank account (on the 25 May) for the transport of the children to the schools. None of the ECDCs made use of these funds to take the children to the garden. The full funds for all eight ECDCs were confirmed for 2011 by the stakeholder engagement manager during a Siyakhana meeting in which five out of the eight Siyakhana group members were

present. The research has found that there was some confusion surrounding the funds which were given to the Siyakhana group in 2010, with many of the members not knowing whether they had been allocated to the group or not. This includes Siyakhana group member three (who is responsible for the management of the Siyakhana group account) who said that she was unsure whether the funds had been given in 2010.

Siyakhana group member eight said that she would like to understand if money is still allocated to the ECDCs to go and visit the garden. Furthermore she said that if this money is still allocated to the Siyakhana group she would like to understand what exactly it must be used for and how it can be accessed. Siyakhana group member two similarly said to me that the other members of the Siyakhana group had told her that there were no funds available to take the children to the garden, but emphasised that during 2009, R500 was allocated to each ECDC to visit the garden. Given this confusion amongst the Siyakhana group (about the availability of funds) only half of the group visited the garden in 2010. For all of these visits the Siyakhana group members made use of their own funds to get to the garden. The visits were made by Love Peace Educare and Pre-School, Silindokuhle and Little Eagles Daycare and Pre-School and Kideo. Half of the ECDCs which visited the garden are from the upper bracket of the Siyakhana group and half are from the lower bracket. All of the members of the group who visited the garden, did so with the children of the ECDCs.

Kideo and Silindokuhle visited the food garden with their children four times and once respectively. The visit made by Silindokuhle was for the ECDCs graduation ceremony. Love Peace Educare and Pre-School visited the garden twenty times during 2010. Of these visits, two of the visits were made with the children from the ECDC and the other teachers. The remaining visits were made by Siyakhana group member in her individual capacity. Siyakhana group member five explains that she loves visiting the garden and through regular contact it enables her to strengthen the relationship between her ECDC and the initiative. Both Love Peace Educare and Pre-School and Silindokuhle made use of the Siyakhana food garden for their graduations. Both of these principals explained to me how having the context of the garden has enabled them to discuss the importance of nutrition

and eating healthy, whilst using the Siyakhana food garden as a tangible reference point. The garden enabled the parents to learn new things about food and especially learn more about vegetables.

Casita de Chocolate Pre-School, Downtown, The Little Roses Daycare and Pre-School and Mai Mai Khuthala Pre-School did not visit the garden at all during 2010. For all those members who did not visit the garden the primary reason was that they thought no funds were allocated by the Siyakhana initiative, and the cost of transport to the garden was too much for them to afford. In addition to this however Siyakhana group member one said that “I had actually forgotten about the garden and was reminded again when we started receiving vegetables” (Siyakhana group member one, December 14, 2010). This was coupled with her poor health, and the fact that she had been very busy at the ECDC with graduations. Siyakhana group member six said that coupled with the cost of transportation, a major factor in her not being able to visit the garden was the time constraints as a result of the renovations at her ECDC. Siyakhana group member six says that “as we have such a small budget it is more important that the children have food in their stomachs rather than a visit to the garden. Therefore I cannot waste the money on the visit when I have lots of hungry stomachs” (Siyakhana group member six, December 08, 2010). Finally Siyakhana group member eight said that “I have not visited the garden as I became despondent with the poor communications. I was angry” (Siyakhana group member eight, December 02, 2010). These issues have been discussed in chapter five and the Siyakhana initiative has appointed Hlangi Vundla (stakeholder engagement manager) to assist in strengthening and fostering the relationship between the Siyakhana group and initiative.

The fact that half of the Siyakhana group did not visit the garden is disappointing, as from the participant observation performed in the garden it is evident that the Siyakhana food garden is a particular example of an experimental learning opportunity which has many positive benefits. The benefits of having a school food garden have been well-recognised by teachers (Bowker et al., 2007: 84). It provides the opportunity to situate children’s learning within wider environments and spaces which extends the resources available to the

Siyakhana group (Bowker et al., 2007: 84). In fact as early as 1909, Montessori identified that children's gardens could be used beyond the standard curriculum to help to develop patience, enhance moral education, increase responsibility and improve appreciation for nature and relationship skills (Montessori, 1964). Furthermore many of the children are indoors all day and have no access to sunlight. By visiting the food garden, the sunshine would assist in the improving the childrens vitamin D intake.

However whilst not all of the group may have been able to visit the garden, it was recognised by half of the Siyakhana group that as a learning site the Siyakhana food garden is particularly effective as it enables children to make the connection between what they see growing in the soil and what they eat. Two of the members felt that their involvement in the initiative has contributed towards self-development through increased knowledge about permaculture and healthy living and eating. The remaining two members thought that the biggest benefits are linked opportunities for the exposure of the ECDCs (to obtain funding) and the supplementary food. Siyakhana group member two feels that through her involvement in the project it has "enabled opportunities for networking and created awareness of the ECDC" (Siyakhana group member two, December 08, 2010). In the first year of the project, her involvement in the Siyakhana initiative enabled the donation of blankets to the ECDC. Siyakhana group member two feels that to increase this benefit in the future, increased awareness of the ECDCs could be raised, for example by putting the details of the Siyakhana group on the Siyakhana website.

Through the understanding of connections between the food that is eaten and where it comes from, the children can also understand the principles of ecology in action and it can help with teaching children to become "ecoliterate" (Bowker et al., 2007: 86). The literature further demonstrates that food gardens encourage and support schools to engage in gardening and to use gardening to support and extend learning in other curriculum areas (Bowker et al., 2007: 84). By using the experience of growing crops, the Siyakhana food garden empowers the Siyakhana members within their teaching capacity. It thus becomes clear that the Siyakhana food garden is doing more than just feeding the children at the

ECDCs, there is a diversification in the type of knowledge which is disseminated between the children and a “living laboratory” for improved learning. Siyakhana group member three explains that “the garden provides a medium through which to teach the children where the food comes from. It provides the opportunity to show children how to plant vegetables and it teaches them about nature.” (Siyakhana group member three, December 02, 2010). This Siyakhana group member also says that the food garden shows the children the importance of food and why you should not waste food. It can be used to teach children about their rights and responsibilities and most of all it provides an open space where they can play and have fun. Clark (1997) reinforces this statement finding that the gardening experience was useful in helping children to learn responsibility. In caring for plants, children must be responsible for a living thing; gardening provides one of the few situations in which children are guided by this effective style of learning.

Siyakhana group member five believes that the garden provides an effective environment to teach life skills and health skills using non-formal education methods. She explains that during the visits with her ECDC the children played in the garden and the teachers and gardeners also showed the children the different plants in the garden, especially the ones that they eat on a regular basis and those which are delivered from the Siyakhana food garden. Group member five says that this “show and tell” exercise helps the children to understand where the food that they eat at their school comes from and what it means when the black bag of produce arrives at the ECDC (Siyakhana group member five, November 08, 2010). This member shared with me pictures which the children drew of the produce that they received from the food garden. **(Refer to figure 16. Children’s drawings of fruit and vegetables based on a “show and tell” exercise).** Through the visits to the garden the children’s learning was both effective and cognitive, facilitated through the teachers engaging the children in practical gardening activities (such as digging holes) and linking them to more formal based lessons (Bowker et al., 2007: 85).

**Figure 16. Children’s drawings of fruit and vegetables based on a “show and tell” exercise**



Siyakhana group member four feels that the garden provides “an open public space in which the children can play” and the children are able to learn about planting and reaping produce (Siyakhana group member four, December 14, 2010). Overcrowding in inner city accommodation in Johannesburg often means that children rarely experience space and nature (Sachs, 2010: 48). This is particularly true for all of the ECDCs facilities which have very small classrooms and outdoor play areas; being on average 30-50m<sup>2</sup> (three of the ECDCs do not have any form of outdoor play area). The open public space which the Siyakhana food garden provides enables the Siyakhana members to move beyond the boundaries and enclosed space of the classroom and walls of the school.

### **Training and skills transfer**

In addition to the value of the food garden as an enabling environment for teaching the children of the ECDCs, the research shows that through the Siyakhana group’s participation in the food garden and broader interaction with the initiative it has helped to teach them about healthy living and permaculture techniques. The primary medium (apart from participation) through which this has been facilitated by the Siyakhana initiative is through

the training courses offered to the Siyakhana group. Two years into the project (2007), the entire Siyakhana group attended an “Introduction to Permaculture” course which was conducted by Food and Trees for Africa in conjunction with the Siyakhana initiative. The training covered issues relating to food insecurity, permaculture, community and social development, health and wellness.

This “Introduction to Permaculture” training course continues to be offered by the Siyakhana initiative and the outcomes include (but are not limited to):

- Understand the principles of ethics of permaculture;
- Awareness of occupational health and safety in the establishment of food gardens;
- Design and plan a food garden;
- Identify the resources required for the establishment of a food garden; and
- Create a resource plan which includes community engagement/involvement.

Other trainings which the Siyakhana group members have attended during their involvement with the Siyakhana initiative are Agriplanner training and herb training. The outcomes of the Agriplanner training are that participants leave with the ability to compile an annual growing plan for their land and a monthly marketing and cash flow plan.

As discussed in Chapter 4 (The Siyakhana initiative), all trainings offered by the Siyakhana initiative whether it is to the Siyakhana group or the public are for free. The trainings are subsidised through the funding received from the Siyakhana funders and stakeholders as training is one of the key ways for encouraging networking, conscientisation and mobilisation to take place. However this does not detract from the fact that these courses cost money and without the support of the Siyakhana initiative funders and stakeholders they would not be able to take place. The cost of this training course is approximately R36 000 for three days which equates to R12 000 per day and R600 per person (based on a training group size of twenty participants). Whilst the monetary value of the trainings can be quantified I was particularly interested in determining the additional non-economic benefits of the training and skills transfer to the Siyakhana group. There were two factors which I



considered in quantifying these benefits, the first was the implementation of urban food gardens and the second was the application of permaculture and healthy living principles to the ECDC environment. The result of the quantification process was that the value of the training courses equates to much more than just the monetary value as they have facilitated the process of empowerment and learning (to varying degrees) for all members of the Siyakhana group. This is demonstrated in the feedback from the Siyakhana group and the empirical data relating to the implementation of food gardens and health promotion within the classroom and wider community.

All of the members reported that the trainings which they attended in conjunction with the Siyakhana initiative were beneficial and applicable to their lives. According to Siyakhana group member three the introduction to permaculture training taught her how to establish a garden, the importance of timing and seasonality, what to plant and why and how to manage the garden over time and ensure sustainability. Siyakhana group member five says that training is a wonderful thing as it enables one to "never stop learning". I "like to learn a lot" and "something new every day" (Siyakhana group member five, November 08, 2010). Siyakhana group member four says that "I have been to so many trainings that I cannot remember all of them that I have been to" (Siyakhana group member four, December 14, 2010). Two of the members said that they did not mind what the future training was on "I do not know specifically what this training should be on, but anything is fine". "I will be happy to receive any additional training" (Siyakhana group member six, December 08, 2010). "I do not mind what it is on, I would just like to learn more" (Siyakhana group member seven, January 19, 2011). It is notable that whilst the initial skills transfer takes place between the Siyakhana group member and the initiative this is also being passed down through the ECDCs to the other teachers. Siyakhana group member seven says that the garden is also a very valuable resource for educating the other teachers at the ECDC about food gardens. She explains that she supports a culture of learning and she has recently enrolled two of the teachers into a course at Bertram's as she feels opportunities to expand one's knowledge are "very important to their development" (Siyakhana group member seven, January 19, 2011).

A major theme which the entire Siyakhana group reiterated was the impact that their involvement in the Siyakhana initiative has had on their lives and how they view eating and nutrition. Siyakhana group member one says that “I was never interested in gardening before the training” (Siyakhana group member one, December 14, 2010). Siyakhana group member eight says that if you grow your own vegetables you can save you money because the costs associated with buying such produce are lessened. In this way the establishment of food gardens can be a positive coping strategy with which to address and fight poverty (Siyakhana group member eight, December 02, 2010). The majority of the literature on the economic benefits of the activity supports this statement. There are many examples from across the globe which demonstrate that growing food has increasingly become an important strategy for, if not survival, then at least a means to meet an income gap (Holland, 2004: 290).

In looking at the value provided by the training courses to the Siyakhana group, the research shows that for those members of the group who visit the garden on a regular basis the knowledge of the courses is further enhanced. “On the job” and practical learning through interaction with the gardeners takes place in an ecologically-appropriate urban food production environment. The gardeners have a wealth of knowledge in information on nutrition and practical herbalism and are able to assist the Siyakhana group in understanding the practical application of the principles learnt in the formal training sessions (Siyakhana, 2009). Mandla Tshabalala (garden manager) is dedicated to educating his gardening team and is continually empowering them to assume more responsibility and duties in the garden. Mandla Tshabalala says that “giving spades and seeds to people is not enough” (TasteMag, 2011). However for knowledge transfer to take place (whether it is through practical application in the garden or formal training courses), the Siyakhana group have to dedicate time towards training. Balancing these priorities is clearly a challenge for the Siyakhana group. The entire Siyakhana group explained that since their initial training, there have been lots of other training offerings by the Siyakhana initiative (different in scope and level to the initial training). However due to their commitments at the ECDCs the

Siyakhana group were unable to take advantage of these opportunities provided and in many cases were unable to attend the trainings and spend time in the food garden.

At the start of the project, the Siyakhana group were actively involved and participated in the gardening activities. The group were responsible for the clearing of the garden site and digging of the beds. However since the initial establishment of the garden, the Siyakhana groups' participation in garden activities and therefore their opportunities for practical learning has dwindled. The research shows that the last time that the group were actively involved in gardening activities was in the beginning of 2009. There are two main reasons for this lack of participation in the garden, the first has been mentioned above which is related to the Siyakhana group's responsibilities at their ECDCs and the second relates to a break-down in communication between the Siyakhana group and the initiative.

The miscommunication is one of the issues of the larger break down in the relationship between the Siyakhana group and initiative. Whilst positive efforts have been made by both the Siyakhana group and the initiative; issues of miscommunication and lack of transparency still influence all spheres of the Siyakhana groups' involvement with the initiative. Half of the members of the Siyakhana group say that they no longer help out in the garden as in June/July 2009 the garden manager went on leave and said he would call the group again when he needed their help, however no one ever called. Similarly according to the Siyakhana group, the project manager explained that he would call the group when he required their help in the garden but also never called. Another area where there seems to be a breakdown in communication is surrounding the role of the gardeners and that of the Siyakhana group. Siyakhana group member five says that she understands that whilst the Siyakhana group assisted in the beginning of the project with the gardening activities, with the growth of the food garden full time resources are required. She says that she is not trying to take work away from the gardeners but rather would like to help with small tasks as many hands make light work.

From the discussions with the Siyakhana group all of the members wanted to rekindle their practical involvement in the project, albeit be it on a small scale due to their commitments at their ECDCs. The majority of the Siyakhana group felt that if they provided their time and labour to the initiative, the initiative should in return provide transport to and from the garden and a meal. The group also felt that there was a need to re-establish the context in which the project was established, where the women played an active role in the activities of the garden. Siyakhana group member six says that she would like “a more hands on approach with the project” and to meet other members of the group in the garden and spend time together getting their hands dirty as they initially did. She says that she would be able to volunteer in the garden once or twice a month and could assist in small tasks such as creating fences around the beds in the garden (which she did in the past). Siyakhana group member two said that she would not like to receive any further training, but would rather be given the opportunity to become more involved in the garden again.

### **Implementation of food gardens by the Siyakhana group**

In determining the value of the training and practical interactions of the Siyakhana group with the food garden, I was interested to see the percentage of the Siyakhana group that have implemented food gardens in their individual capacity and/or at their ECDCs. Based on Sen’s capabilities theory if the Siyakhana group have the ability to initiate and implement urban food gardens, their capabilities for development have been strengthened through their engagement in the activity of urban agriculture. Another factor used to measure the value of the enabling environment of the food garden is the extent to which the group members have incorporated the principles of healthy living into their ECDCs. Moving further afield I investigate how far the knowledge surrounding food gardens and ecological health promotion extends beyond the walls of the ECDCs to the children, their families and the broader community.

The research demonstrates that half of the Siyakhana group (in their individual capacity) have food gardens and engage in urban agriculture at their homes (Siyakhana group member three, Siyakhana group member four, Siyakhana group member five and Siyakhana

group member six). The main type of produce that is grown by these four Siyakhana members is potatoes, cabbages, carrots and pumpkins. For the half of the Siyakhana group who engage in urban agriculture at their homes, they reported that they learnt the techniques from formal trainings with the Siyakhana initiative and through spending time in the Siyakhana garden and observing the practical gardening activities. Siyakhana group member four explains that through learning about different soils she knows that to overcome clay soils (which are not suitable for root vegetables) one can use tyre gardening (Siyakhana group member four, December 14, 2010).

The inputs required for home food gardens are low cost and simple and all of the group grow the food to supplement the food which is purchased for the household. Siyakhana group member five explains that she has a food garden in her home in the Eastern Cape however she has never actually thought about having her own garden in Johannesburg. In response to my question (whether as an individual she engages in urban agriculture) she eagerly says that I have made her think about it and she is going to start by growing some spinach. Inspired by the Siyakhana food garden, Siyakhana group member five aims to eventually extend her food garden in the Eastern Cape to become a fully-fledged nursery which grows and sells vegetable and herb seedlings. She believes that this project will not only help share the inputs required for the production of nutritious food but will also generate jobs for women in the area.

Siyakhana group member three has just a few small pots with different herbs in them such as mint and curry leaves. She explains even though she only gets a small amount of produce she still feels proud that she is engaging in some type of urban agriculture activity. At the household level no matter how small the activity is, it still enables individuals to take responsibility and ensure a healthy diet by cultivating fresh food. The literature on urban agriculture shows that survival and subsistence food gardens represent an important first step in developing household coping mechanisms. Furthermore it disproves the notion that large expanses of space are required for successful urban agriculture activities, rather “small is beautiful and bountiful” (Featherstone, 2005: 6). Production methods such as “movable

gardens” in containers and bags produce high yields in limited spaces. It is a large misconception that gardening can only occur outdoors in ploughed beds where the plants need to be grown in rows.

Siyakhana group member eight says that at her flat in the inner city “there is not even enough space to try and create a tyre garden” (Siyakhana group member eight, December 02, 2010). However whilst a tyre garden may not be an option, every house/flat regardless of size has a window sill on which small pots of herbs can be grown. Large pieces of land are not necessary to make a difference to a family’s nutritional status. A paradigm shift is required by inner city residents in accepting the value that small initiatives such as the growing of herbs can make. Not only do herbs enhance the flavours of one’s food, but they also contribute towards providing households with vital vitamins and minerals for healthy eating and living. Limited space production methods were covered in the “introduction to permaculture” training which the Siyakhana group attended in 2007. However it is possible that because the Siyakhana food garden does not engage intensively in these methods that the Siyakhana group have not seen such methods in practical operation. This highlights the importance of the food garden as a “living laboratory”, for successful learning and empowerment both practical and theoretical dimensions should be addressed.

The principal of Little Eagles Daycare and Pre-school is the only member of the Siyakhana group who has a food garden at her ECDC. It is a tyre garden which is located at the front of the ECDC. Figure 16 illustrates the children of the ECDC eagerly helping two of the teachers prepare the soil in the tyre for food production. Last season the ECDC had a successful yield of onions and spinach from the tyre garden. The ECDC also grew flowers for aesthetic reasons. The principal recognises that whilst the vegetables grown in the tyre are insufficient to supplement the food of the ECDC, it is a start. It provides the principal with the opportunity to put into practice the knowledge which she has learnt from her engagement in the Siyakhana food garden and the trainings she has received. The tyre garden has also enabled the teachers and principal to educate the children and adults on the value of urban agriculture as a tool for development rather than as a punishment

(agriculture has traditionally been portrayed as a punishment within the South African education system).

**Figure 17. Children and teachers preparing the tyre garden in the front yard of The Little Eagles Daycare and Pre-School**



Despite the literature on urban agriculture which emphasises the ease with which home and school gardens can be established, the findings of this research demonstrate that whilst it may require low inputs and a small amount of space there are many other constraints to implementation. This is demonstrated by the high failure rate within the Siyakhana group in the implementation and establishment of food gardens. Three of the members of the Siyakhana group – Siyakhana group member one, Siyakhana group member five and Siyakhana group member seven have all tried to engage in urban agriculture but reported that they have failed. The first two instances of implementation are however positive, with the difficulties being experienced in the sustainability of the projects rather than in the start-up phase. The last example however is different with the largest challenges being faced in the actual initiation stage of the project.

Siyakhana group member one says that she managed to start a food garden at the ECDC, however the maintenance and up keep of the food garden became problematic. “The other teachers were lazy and I did not have enough time to supervise them” (Siyakhana group

member one, December 14, 2010). This example illustrates the need for not only the principals of the ECDCs to attend training on the growing of food and healthy lifestyles but also for the teachers and the other staff members. Bottom up on-going support from the ECDC staff and teachers is required, as due to the multiple roles and responsibilities of the principals it is unfeasible for them to manage the food garden alone.

Siyakhana group member five says that she is determined to grow plants and vegetables on the balcony of her ECDC despite the fact that the building is in a high rise block of flats in the inner city. "There were greens and mielies that I had growing, but it did not last as they were pulled out by other children [those who do not attend the ECDC] from the block of flats, so I never had the opportunity to see them completely flourish" (Siyakhana group member five, November 08, 2010). This is a positive example however, as through impacting the behaviour of the children, success could be achieved. Siyakhana group member seven (who has problems in the project initiation stage) says that "I have tried before, but I need to get a fence and materials for the garden. I would like to receive seeds from the Siyakhana garden in order to be able to plant something around the ECDC in Orange Farm" (Siyakhana group member seven, January 19, 2011). Currently the bed which was prepared for the vegetables is just filled with weeds. The major problem for this ECDC is that the chickens come and pick the seeds out of the bed before they have even had a chance to grow. With the help of materials however this ECDC could have the opportunity to engage in extensive urban agricultural activities. The neighbours of this ECDC all have successful food gardens in their yards and due to the fact that Orange Farm is not in the inner city, there is a much greater availability of space for growing produce.

For the remainder of the Siyakhana group (half of the group) who do not have food gardens at their ECDCs, the overriding reason was insufficient time to prioritise a food garden project amidst other more pressing ECDC requirements. Two of the ECDCs moved premises and the other two ECDCs were having renovations done on the buildings. However what is promising is that all of these principals reported that they are considering the activity and thinking of ways to overcome their challenges and implement food gardens in the future.



None of this group gave concrete timelines on what constituted the near “future”. Two of this group have recently moved into their facilities and therefore they were both still concerned with obtaining registration for their facilities with the Department of Social Development and did not have time to focus on other projects such as urban agriculture. Siyakhana group member three (who has recently moved into her ECDC) says that she is considering indoor cultivation (growing the herbs along the window sills of the ECDC) and the growing of mushrooms, but she needs the building plans to be first get her registration certificate before she embarks on any new projects. Siyakhana group member two (who has recently moved into her ECDC) says that there are lots of places on the Primary School grounds where vegetables and herbs could be grown. She is nervous however to discuss her ideas for food production with the landlord as she does not have a well-established relationship with him.

Siyakhana group member eight says that she has land at the back of the ECDC which could potentially be used as a site for urban cultivation however it is currently covered in steel and rubble which has been left over from the building renovations. She says that she needs help in clearing the area, but has not had the time to prioritise this project amidst her other activities at the ECDC. Siyakhana group member six has started planning for the initiation of a food garden by collecting cardboard boxes in which she is going to place the soil and mulch. “I am planning to implement one in the New Year (2011), I just ran out of time this year” (Siyakhana group member six, December 08, 2010).

### **Health promotion by the Siyakhana group**

The second factor used to measure the extent to which the Siyakhana group have benefited and applied the knowledge they have learnt from the formal training courses and practical on site learning in the garden is the extent to which health promotion takes place within the classroom. This directly links to one of the key objectives of the Siyakhana initiative which is to raise awareness, facilitate the exchange of knowledge and stimulate social change through networking and mobilisation (SIEHFS, 2011: 4). For the purpose of the discussion I understand health promotion as a process directed towards enabling people to take action.

Therefore it is not something that is done by the principals on or to the children and parents, but rather it is done by, with and for people either as individuals or groups. During the fieldwork I looked at the extent to which the principals of the Siyakhana group strengthened the skills and capabilities of the children and parents to influence their eating habits.

The impact of health promotion activities on the parents of the children of the ECDCs was significant. Six out of the eight members of the Siyakhana group explained to me that through their connection to the food garden they have created awareness and educated the children's parents on issues of permaculture and healthy living. The entire Siyakhana group said that by having access to an actual working environment it was much easier for them to promote healthy living principles amongst the parents. Thus the Siyakhana food garden acts as a tangible reference point against which health promotion can take place.

Siyakhana group member two says that the children's parents have visited the food garden and during their visit Mandla Tshabalala (garden manager) helped them to understand diabetes and how you should eat for diabetes. She explained that it was a great opportunity for the parents who come from low-income environment and who otherwise would not be exposed to the concept of a food garden. Siyakhana group member three says that whilst all of the parents know about the ECDCs involvement with the food garden, the ones who most frequently receive supplementary food from the ECDC are more aware of the benefits than the other parents. These parents who receive the food are sick and unemployed and without the supplementary food from the ECDC the children, do not receive a meal from home.

The Siyakhana group members are committed to serving the children at their ECDCs healthy and nutritious meals. The entire Siyakhana group said that through their involvement with the Siyakhana initiative it has helped to stimulate their interest in healthy living and lifestyle, which they then pass onto the children and the parents. Siyakhana member three explains that through her interaction with the Siyakhana initiative she has realised "the importance

of eating vegetables and the influence of food on everyday health and well-being” (Siyakhana group member three, December 02, 2010). During all the field visits I never saw any of the children eating junk food. In fact Siyakhana group member five says that it is not only the children who need to be educated about eating healthily but the parents as well. She tells me how “often the children are sent to school with sweets, fizzy drinks (or highly concentrated mixes of energade) and chips” (Siyakhana group member five, August 05, 2010). If the children bring this type of food to the ECDC it is confiscated and put on the top of a shelf (where all the children can see it) and then it is given back to the parents when they fetch the children.

It is also evident that knowledge obtained from the Siyakhana initiative is being shared with the larger community. Siyakhana group member eight has shared her knowledge and connections obtained through her involvement with the Siyakhana food garden with another food garden project in Bertram’s. She demonstrates that it is not about being part of one or the other, but rather the sharing of knowledge that she was able to give to the Bertram’s community as a result of her involvement with the Siyakhana food garden. “I do not like to compare the two projects and I cannot say that one is better than the other” (Siyakhana group member eight, December 02, 2010). This sharing of knowledge shows a very powerful way in which the Siyakhana group can become the “thought leaders” of the project, helping to spread the knowledge and learnings of Siyakhana across communities that it would not normally have direct access to. This interaction and sharing of knowledge is one of the key objectives of the Siyakhana initiative.

In this chapter I have looked at the two main ways in which the Siyakhana group benefits from their involvement in the Siyakhana initiative. This is the receipt of supplementary fresh fruit and vegetables from the food garden and the enabling environment which the food garden provides for learning and information sharing. The research has shown that the benefit of the supplementary food extends way beyond just the Siyakhana group and helps a much broader community. In this way the Siyakhana group acts as a vehicle through which the larger food insecure community of the inner city can also benefit from access to healthy

and nutritious food. A similar theme is seen with the enabling environment that is provided by the food garden, whilst the permaculture trainings had a direct impact on the principals, it has also provided hundreds of children at these ECDCs with a unique and practical learning environment. Furthermore the trainings which have been learnt by the Siyakhana group have been shared across the country, contributing towards the strengthening of an interconnected, shared food network community.

## **Chapter 8: Conclusion**

This chapter provides an overview of the research which has explored the links which exist between urban food gardens and community development through a case study of the Siyakhana initiative. I have determined the role of the Siyakhana food garden in not only improving the food security of the direct participants and children at the EDCs, but also how the food garden has contributed towards an educational, relational and capacity building of the Siyakhana group. I begin with providing a summary of the literature review which was performed on urban agriculture, food security, poverty alleviation and community development. This broad range of literature was used to argue that urban agriculture has a key role to play when it comes to addressing poverty and food insecurity in a rapidly urbanising world that is economically structured in ways that do not benefit the expanding number of people living in poor communities.

A review of the objectives and problem statement (which is derived from the analysis of the literature) is then provided to assist in understanding the direction of enquiry and the purpose of the research in relation to community development. It is through the objectives and problem statement of the research that I explored the larger relevance of urban agriculture activities and community based projects to the development field as a whole. Instead of focusing on the well-known economic dimensions and benefits of urban agriculture, I have explored the non-economic dimensions and benefits. The approach and research methodology (the single case method) is discussed, in particular to introduce and present the key findings of the research. Finally the chapter ends with understanding the implications of the findings for the development field. Although there have been multiple studies on the Siyakhana food garden and urban agriculture more broadly, this study is unique in its focus on the broader community of beneficiaries. In considering the implications I look to the ways in which the research can provide innovation and a new perspective on urban food gardens and community development in South Africa.

In order to understand the activities and practice of urban agriculture, the literature review began with tracing the origins of the activity. The practice of urban agriculture has existed

for thousands of years; however the formalisation of the activity as a field of enquiry can most commonly be identified with the 1980's. According to the development literature, the emergence of the activity was largely in response to the development crises of the sixties characterised by failed SAPs and extensive rural exodus of the population (which in turn led to rapid urbanisation). This context highlights the fact that initially urban agriculture developed as a livelihoods and survival mechanism of the poor. In line with this logic, the majority of studies and literature on urban agriculture focuses on the economic benefits of the activity. According to the literature, the economic benefits of urban agriculture have the potential to address two key development challenges namely poverty and food insecurity (Tambwe, 2008; Hovorka, 2002; Slater, 2001; Drakakis-Smith, 1993). Urban food gardens provide those engaging in the activity with produce which can either be used for self-consumption or sold to the market to generate income for the family unit and provide employment.

Since the 1980's a second wave of urbanisation has emerged across the globe and more specifically on the African continent. We are living in an era, where for the first time in history more than half of the human population is urbanised and cities in both developed and developing countries are facing enormous challenges in terms of food security (Sonnino, 2009: 425). This second wave of urbanisation has profound implications for development interventions and strategies such as urban agriculture, thus I was particularly interested in contextualising urban agriculture within this larger dynamic. I explored the dramatic growth of the urban population in sub-Saharan Africa which is characterised by an annual growth of fourteen million people. The projections for future growth are staggering, according to De Bon et al., by 2030 more than fifty percent of the African population is expected to live in cities (De Bon et al., 2010: 22). Similar trends are echoed in South Africa, where over the past five years we have experienced a twenty five percent growth rate in the urban population. In another five years it is expected that there will be a further eleven percent growth of the urban population (Stats SA, 2010: 4; Rudolph et al., 2008: 7; Stats SA, 2005:20).

The sustainability of this rapid growth was questioned and an argument made that if populations continue to grow on the existing path without paying attention to ecological issues future generations are going to be in serious trouble (Swilling, 2006: 23). It is a dangerous assumption that resources will always be able to support rapid growth without an associated rise in prices for fresh water, fossil fuels and food. Coupled with the challenge of reducing inequality is the need to pursue this with a sustainability agenda. Urban growth in South Africa and urban food requirements are bound to induce significant changes in African agriculture. Against this second wave of urbanisation and amidst the global economic crisis, we understood that the traditional development challenges of the past are becoming even more apparent. This is represented by the fact that the gap between the rich and the poor continues to widen. South Africa is one of the most unequal societies, it has a Gini coefficient of 0.68 (Southern Africa Report, 2011). In addition to the gap between rich and poor, the landscape is also scarred; the lack of a fully developed urban policy has left unintended and contradictory spatial consequences (Pillay, 2008: 14). Based on the continuing existence of these large inequalities (over ten years after democracy), this research investigated the efforts and successes thereof, of national imperatives to reduce poverty and improve equity. As an overlay to these development issues, a review of policies and interventions related to food security in South Africa was also provided.

A range of primary policy interventions were referenced focusing on the most recent iterations which include but are not limited to the NDP "Mzansi 2030" and integration strategies such as the Urban Development Strategy and The Urban Development Framework (Parnell, 2004: 2). The review of these interventions emphasised that whilst they are relevant and orientated towards development needs and applicable to the economic and social climate of South Africa implementation remains a challenge. This was reiterated by the fact that since democracy there has been a rise in unemployment, income poverty and income inequality (Bhorat et al., 2006: 1). In Johannesburg (the location of this research) more than half the households earn below the national minimum of R1 600 per month (Bengnwi, 2009: 22). It has been estimated that at least twenty percent of South Africans (about five million people) have insufficient access to food. Inclusive societies begin

with a commitment towards sustainable and liveable cities. The more comparative and comprehensive studies done on urban agriculture and urban food strategies, the better we will be able to fully capture the potential of fast-growing cities in creating or recreating more sustainable social, economic and environmental linkages with their surrounding areas (Sonnino, 2009: 25).

Pertinent to the discussion of poverty was the need for understanding the dynamics of urban poverty and livelihoods in particular. Sen's livelihoods approach helped inform my understanding of poverty and community development. By using this approach I understood poverty as capability deprivation and not only as a measure of GDP/capita. This meant that capability was understood as the criteria for assessing the standard of living, and by implication poverty. Given the incidence of poverty in South Africa, I investigated the extent to which urban agriculture is practised and the ways in which it can improve capabilities. The overall picture which emerged is that in South Africa there is much less urban agriculture taking place than in other African countries, and there is no co-ordinated, systematic approach towards urban agriculture as a development strategy. In Johannesburg only three percent of all households grow their own food. It was also highlighted that urban agriculture contributes very little to the formal food market. Slater argued that taken further than the formal food market, urban agriculture in South Africa does not contribute substantially to household income or food consumption (Slater, 1994). These findings shaped the research agenda which argued that in addition to the well-known economic benefits (or supposed economic benefits) there is a large range of social benefits which are offered by the activity. Historically, little research has been performed on the social benefits of urban agriculture.

Studies which have examined the social sphere of urban food gardens have demonstrated the immense value which urban and community food gardens can offer to communities as a tool for social integration, skills transfer and capacity building. This study contributes to this body of literature and provides insightful data into the similar social impact urban food gardens have in developing countries such as South Africa. With the core focus of the



research being on the social benefits of urban agriculture, it was necessary to explore the community development literature and specifically the role of empowerment and participation in building community capacity. I acknowledge the fact that for the most part, the traditional economic growth paradigm has lost credibility and a people-centred and human capacity approach to development has become part of the mainstream literature. However, although there is consensus around the need for equitable, participatory and human development the language and meaning can vary substantially across context and development stakeholders and implementers. It was for this reason that the literature review focused on clarifying the meaning of many “buzz words”. The concept of “community” was problematised and unpacked. I highlighted the dangers of thinking about communities as homogenous beings, emphasising that community can produce co-operation and mutuality, but can also be divisive and create conflict. This was shown in the important differences between the ECDCs, often having to do with leading figures within the organisations. Based on the human development paradigm that community development is more than just GDP/capita improvement I interrogated the role of urban agriculture in building capabilities for development.

The key themes of the urban agriculture and community development literature informed the larger relevance of this research to the development field. In establishing the social benefits of urban agriculture, I was interested how food gardens can play an educational, relational and capacity building role for communities involved with them. To this end the research had key objectives all relating to the larger themes of participation, community development and empowerment. The first objective was to understand what types of links exist between community development and urban food gardens. Second, I was interested in contextualising the Siyakhana community, in particular who they are, why they are involved in the project and how they connect and collaborate with one another. Finally I wanted to understand the contributions of the Siyakhana initiative to the community. Whilst I focused on the social benefits, quantification of both the economic and non-economic benefits took place.

In order to achieve the objectives of this research, the single case study method was adopted in combination with participant observation, interviews and documentary analysis. A period of twelve months was spent engaging with the Siyakhana community to understand and appreciate the relations among the different actors. During these twelve months I spent time at the ECDCs and the food garden observing day to day activities. By spending time with the Siyakhana group and their wider community I was able to understand the ways in which their involvement with the project has contributed to the building of capacity through development and education. This time helped develop my understanding of the potential of urban agriculture and how some people really make it work for them while others are more passive. This is the first study on the Siyakhana initiative which engaged at community level, understanding the everyday activities and lives of the participants and their interactions with the food garden. My time spent in the garden taught me the patience and hard work required for permaculture and organic farming. I watched the gardeners plough and work the land, transforming barren parts of the garden into productive spaces heralding large varieties of fresh fruits and vegetables. The gardeners who work in the garden also provided me with valuable insight into their lives and the ways in which their engagement with urban agriculture has altered the possibilities for their future.

In order to understand the objectives and vision of the Siyakhana initiative, a brief history of the last five years was provided. The project began in 2005 with the establishment of the permaculture food garden. Over the years the food garden has become just one project of the wider initiative. The initiative has expanded to a range of activities which are all linked to the objectives of improving accessibility and availability of nutritious food; networking, conscientisation and mobilisation; research and development and economic sustainability. All activities of the initiative are in some way or another linked to improve food security and ecological health promotion in urban and peri-urban areas. Despite the dramatic growth which the project has experienced over the past five years and the diversification of activities, community development remains at the core of the initiative. The initiative is host to a complex organisational structure, however simplistically it consists of a complement of

five head office staff and two groups of beneficiaries (and the support of Wits University departments, donors, technical experts and partners from a wide variety of fields). During the research what was particularly interesting was the way in which the food garden has institutionalised its learning. It takes criticism seriously and tries to address its weaknesses; not only the food garden but the initiative is in a constant process of learning and development.

The two beneficiaries (Siyakhana group and full time gardeners) receive both economic (supplementary food) and non-economic benefits (training, skills development, enabling environment, positive association) from being involved in the Siyakhana initiative. One of the major findings of the study was that in addition to these two recognised groups of beneficiaries, a much wider group of the community benefits from the Siyakhana initiative. The supplementary food received from the food garden is shared with the poor and sick in the community, thus the urban food garden acts as the conduit for wider community development. Despite the benefits which are offered by the Siyakhana initiative to the beneficiaries, past research highlighted the fact that there were challenges with the relationship between the one beneficiary (Siyakhana group) and the initiative. However no research looked beyond the challenges of this relationship to the effect on the broader community of beneficiaries.

In understanding this broader community of beneficiaries, I started by developing an in-depth understanding of the Siyakhana group. I then looked at whether community projects have a wider impact and if so what this impact is in concrete terms and specifically for the primary beneficiary of the project the Siyakhana group. The Siyakhana group consists of eight principals of EDCs located within the inner city of Johannesburg. The research highlights the differences which exist between these principals, with others really making urban agriculture and their involvement in the Siyakhana initiative work for them and others being more passive. The EDCs were analysed in terms of four broad categories: infrastructure and urban form, human resource capability, funding and economic participation and food and nutrition.

The research and infrastructure of the ECDCs was particularly important to the informing and understanding of urban poverty for this study. It highlighted the half-built environments in which these ECDCs have to operate. Challenges of underdeveloped, overused, fragmented and make-shift urban infrastructure where essential services are erratic are part of the ECDCs every day existence within the inner city. Based on the infrastructure of the ECDCs, I was able to identify a higher and a lower bracket of ECDCs within the Siyakhana group. The distinction between the two groups was informed by a cross-examination of the physical infrastructure and amenities. Amenities which were considered were: location, clean water and sanitation, cooking facilities (kitchen), outdoor play area, classroom space and secure premises. I also looked at the human resource capability of the ECDCs and found that the higher bracket of the Siyakhana group had the largest number of children (ninety) compared with the lower bracket of the group (sixty). Furthermore the higher bracket of the group had significantly more resources to assist in the running of the ECDC with additional resources such as cleaners and cooks (which the lower group do not have).

All of the ECDCs are independent institutions and therefore work on a fee based structure. However what was evident is that due to the low income communities in which they operate all of the ECDCs subsidised some of the children. Seventy five percent of the Siyakhana group subsidise seven percent of the children which attend their ECDCs. The need to subsidise children combined with the fact that only half of the ECDCs of the Siyakhana group are registered with the Department of Social Development means that they are unable to apply for government funding or support. Overall, the research showed that the Siyakhana group struggle to secure economic resources for the operation of the ECDCs. Given the economic constraints with which the group are faced I was interested in establishing the effect that this may have on their ability to feed the children at the ECDCs. The results showed that the majority of the Siyakhana group source their food from local shops. Monthly spend by ECDC per month was R3450 for the higher bracket and R2225 for the lower bracket. What was interesting however is that if you equate the food spend by

ECDC per child the lower bracket of the group only spend R3 less than the higher bracket. This demonstrates the value which the Siyakhana group place on food and nutrition for the children of the ECDCs, despite other resource constraints with which they are faced. I also discussed the take home rations (provided by the supplementary food received from the food garden) that are given to the children to share with their families and wider community. Take home rations have been recognised for the role that they play in keeping children at school.

Now that we have understood who the Siyakhana group are, I will look at the benefits to the Siyakhana group of being involved with the initiative. The findings of the research highlight that there are primary ways in which the Siyakhana group benefit: supplementary food and an enabling environment for training and skills transfer to take place. Attributable to both benefits, this study has shown that the Siyakhana group have grown in their self-awareness around health issues and have benefited in terms of the quality of food which they provide to the children. In terms of the supplementary food which the Siyakhana group receive I looked at their past experiences in receiving this food. I found that prior to August 2010; the experience of the Siyakhana group was that deliveries of food were sporadic, with weeks passing during which no food would be received. I established that the reasons for this were not related to the poor yield of the garden, but rather to the logistics around the delivery and distribution of the produce.

Whilst I was conducting the research, there was a clear turning point in the poor delivery of produce from the garden. In August 2010, the stakeholder engagement manager was appointed. This appointment led to the dramatic improvements in the delivery and distribution of the produce to the Siyakhana group. Consistent deliveries took place on a set day of the week according to a planned route and schedule. With the ECDCs receiving regular food, I was interested in quantifying the amount, type and quality of the produce that was shared with the Siyakhana group. I found that for the five largest ECDCs, the food from the garden was sufficient to supplement one to two meals and for the three smaller ECDCs it was sufficient to supplement three to four meals. As mentioned before all of the

E CDCs also shared the food from the garden with the wider community. The quality of the food was reported as being different to that bought from the shops and the Siyakhana initiative seemed responsive to the group's needs by increasing the diversification of the produce shared with the beneficiaries and planning to grow more root vegetables. A quantification of the monetary value of the produce was performed, established that based on a standard basket of goods provided to the Siyakhana group on a weekly basis from the food garden and compared to a local shop (where the majority of the group source their food) the food garden contributes R7264 per month to the Siyakhana group.

From the cost calculation of the value of the food provided by the Siyakhana food garden per child (R160) the research showed that the food garden was not necessarily the cheapest way to address food security compared with the street vendors, shops and supermarkets. It was this finding that further justified the central tenant of this study i.e. the need to investigate the social benefits of urban agriculture and food gardens. It showed that just as we cannot measure economic growth as a percentage change of GDP, we cannot measure the value of food gardens simply through the quantification of their outputs. This leads us to understand the second benefit of the food garden which is the enabling environment provided by the food garden and the training and skills transfer. The "living laboratory" provides an opportunity for the Siyakhana group to visit the food garden with the children of the E CDCs and understand the principles of ecology in action. It also provides an open space in which children can play. Despite the benefits, during 2010 only half of the Siyakhana group took advantage of this opportunity and visited the garden with the children. The overriding reason for this lack of participation was ascribed to the lack of clarity surrounding funds which the Siyakhana group could use for the transport costs of the children to the garden.

Since their involvement in the project, the Siyakhana group have been exposed to a multitude of organised training courses (introduction to permaculture, Agriplanner and herb training). A crude costing of this non-economic benefit was taken in terms of the cost of the course which equated to R600 per person per day on training. However the real

measurement looked at the extent to which the Siyakhana group have implemented food gardens and introduced health promotion in the classroom and the wider community. The results in both cases were positive, in their individual capacities half of the Siyakhana group engage in urban agriculture. At their ECDCs, only one member engaged in the activity but three had previously tried to implement food gardens, but failed to sustain the gardens. These three members highlighted an important aspect of urban agriculture which is that even when one is knowledgeable and informed about the practices of the activity, to sustain a food garden takes time, dedication and effort. Finally through my interactions with the Siyakhana group in a classroom setting, health promotion was introduced in all aspects of the schooling. Across the board whether it was the food which was produced and consumed by the children at the ECDCs or the topics of the lessons, the central theme of health promotion permeated through.

The research has found multiple links which exist between urban food gardens and community development. Whilst the initiative is not perfect and it has had its own problems over the years (like with any other community development project), I learnt that it is the way in which the initiative responds to the problems and challenges and overcomes these that makes it a success. The research has contributed towards a growing body of research that argues urban agriculture has a key role to play when it comes to addressing poverty and food insecurity in a rapidly urbanising world that is economically structured in ways which do not benefit the expanding numbers of people living in urban poor communities. Through their connection to the Siyakhana initiative the Siyakhana group have improved availability and accessibility of nutritious sustainably produced food.

I have explored the non-economic dimensions and benefits of urban agriculture and focused on the Siyakhana initiative as a community development project which has been structured to benefit the Siyakhana group. The Siyakhana food garden has played a role in not only improving the food security of the direct participants and children at the ECDCs (and the wider community) but also how the garden has played an educational, relational and capacity building role. It has helped raise awareness and promote healthy living for the

Siyakhana group, the children of the ECDCs, their parents and the wider community. Based within the community development paradigm I illustrated that if community development is more than just GDP per capita improvement, then we need to analyse urban agriculture in ways which investigates its role in building capabilities for development.

This study has demonstrated the successful integration of urban agriculture in urban and community development, and the conditions necessary for social, economic and environmental sustainability (De Bon et al., 2010: 30). Through partnering with the Siyakhana community and leveraging local resources the Siyakhana initiative has helped build and improve the gardeners, Siyakhana group and wider community's access to healthy and nutritious food. The lessons learnt from the Siyakhana initiative has shown us that for sustainable community development to take place we need to support and build long-term strategies and solutions. Whilst there are no cure-alls the Siyakhana initiative is a successful example of how change can take place to enable community development. Change is a slow process, but the Siyakhana initiative is an example of how through commitment, reframing and rethinking about the project, it is flexible and responsive to the beneficiaries needs. The behaviour of the Siyakhana group is changing their expectations are growing and most importantly through their connection to the Siyakhana initiative they all have improved knowledge and capabilities. The Siyakhana initiative is not just an ideological solution, but rather a dynamic pluralistic community development project where private and public sectors, for-profit companies and non-profit causes are operating side-by-side to address food security and promote ecological health in South Africa.



## References

- Afronline – The Voice of Africa. 2011. Farming in the heart of Joburg. <http://www.afronline.org/?p=2645#more-2645> [Online] available: (25/06/2011).
- Alberta Education. 2007. *Primary Programs Framework – Curriculum Integration: Making Connections*. Australia.
- Aliber, M. 2002. *Poverty-eradication and sustainable development*. Cape Town: Human Sciences Research Council.
- Amin, A. 2008: Collective culture and urban public space, *City*, 12: 5-24.
- Anyidoho, N. 2010. Communities of practice': prospects for theory and action in participatory development. *Development in Practice*, 20 (3): 318-328.
- Armstrong, P., Lekezwa, B., Siebrits, K. 2008. *Poverty in South Africa: A profile based on recent household surveys*. Stellenbosch Economic Working Papers: 04/08. Bureau for economic research at the University of Stellenbosch.
- Arruda, M. 1994. A Creative Approach to Structural Adjustment: Towards a People-centred Development', in J. Cavanagh, D. Wysham and M. Arruda (eds) *Beyond Bretton Woods: Alternatives to the Global Economic Order*, pp. 13-24. London: Pluto.
- Asthana, S. 1996. Women's health and women's empowerment: A locality perspective. *Health and Place*, 2(1), 1–13.
- Batliwala, S. 2007. Taking the power out of empowerment – an experimental account. *Development in practice*, 17 (4/5).
- Bauta, B., Kostkova, D., Parsia, S., Restrepo-Guzman, R. 2008. *The Impact of Urban Food Gardens on the Health of Communities: an Evaluation of the Siyakhana Bezuidenhout Park Permaculture Project in Johannesburg, South Africa*. Masters Programme in Global Public Health: New York University.
- Beall, J., Crankshaw, O., Parnell, S. 2000. The causes of unemployment in post-apartheid South Africa and the livelihoods strategies of the poor. Royal Dutch Geographical Society: 379-296.
- Bebbington, A., Lewis, D., Batterbury, S., Olson, E., Shameem Siddiqi, M. 2007. Of Texts and Practices: Empowerment and Organisational Cultures in World Bank-funded Rural Development Programmes. *Journal of Development Studies*, 43 (4): 597-621.

Bengnwi, W. 2009. *Sustainable urban livelihood challenges: A case for urban agro-ecology in Johannesburg*. University of Witwatersrand, Johannesburg.

Bess, K., Prilleltensky, I., Perkins, D., Collins, L. 2009. Participatory Organizational Change in Community-Based Health and Human Services: From Tokenism to Political Engagement, *Am J Community Psychol*, 43:134–148.

Bhorat, H., Kanbur, R. 2006. *Poverty and well-being in post-apartheid South Africa*. Cape Town: Human Sciences Resource Council.

Bowker, R., Tearle, P. 2007. Gardening as a learning environment: A study of children's perceptions and understanding of school gardens as part of an international project. *Learning Environ Res*, 10:83–100

Breuer, David. 1999. *Community participation in local health and sustainable development: A working document on approaches and techniques European sustainable development and health series*. World Health Organization.

Burawoy, M. 1998. "The extended case method" in *sociological theory* 16 (1): 4-33

Cavaye, J. 2011. *Understanding community development*. Australia: Cavaye community development.

City of Cape Town. 2003. *Planning and Environment Directorate: Early Childhood Development Centres (ECD Centres)*. Government Printer: Cape Town.

City of Johannesburg. 2002. *IGoli 2030*. Government Printer: Johannesburg.

City of Johannesburg. 2011. Community Development Charter. [Online] available: [http://www.joburg.org.za/index.php?option=com\\_content&task=view&id=2277&Itemid=49](http://www.joburg.org.za/index.php?option=com_content&task=view&id=2277&Itemid=49) (22/08/2011).

Chambers, R., Conway, G. 1992. *Sustainable Rural Livelihoods: Practical Concepts for the 21<sup>st</sup> Century* (University of Sussex, IDS Discussion Paper 296), Brighton, IDS.

Cheetham, Nicole. 2002. Community participation: What is it?, *Transitions*, 14(3).

Chinemana, F. 2006. *An evaluation of the Siyakhana Food Garden Project Johannesburg*. Unpublished manuscript.

Chipkin, I. 1996. Contesting community: the limits of democratic development. *Urban Forum*, 7(2): 217–31.

Christenson, J. A. 1989. *Community development in perspective*. Ames: Iowa State University Press, Ames.

- Clark, D. 2005. Sen's Capability Approach and the Many Spaces of Human Well-being. *The Journal of Development Studies*, 41 (8): 1339-1368.
- Clark, M. T. 1997. The learning process: Why youth gardening. In B. Shalucha (Ed.), *The long view ahead: Civic garden centers serving people, plants, ... plants, people*. Bloomington, IN: National Civic Garden Centers, Inc., Indiana University Publications.
- Cleveland, D. A., Orum, T. V., Ferguson, N. 1985. Economic value of home vegetable gardens in an urban desert environment, *Hortscience*, 20(4): 694-696.
- Couto, R. A. 1998. Community coalitions and grassroots policies of empowerment. *Administration and Society*, 30(5), 569-594.
- Constitution of the Republic of South Africa. Chapter 2, section 27.1b. Government Printer: Pretoria.
- Crawford, W., Jordi, K. 2005. *False Bay Hospital Community Garden*. Workshop on Urban Micro-Farming and HIV-Aids: Johannesburg – Cape Town, South Africa: 1-3.
- David, R., Craig, Y. 1997. Participation begins at home: adapting participatory development approaches from Southern contexts, *Gender and Development*: 35-44.
- Dawson, H. 2008. *Evaluating Siyakhana Food Garden in, Bezuidenhout Park, Johannesburg: A suitable model for urban agriculture*. Unpublished manuscript.
- De Bon, G., Parrot, L., Moustier, P. 2010. Sustainable urban agriculture in developing countries. A review. *Agronomy for sustainable development*: 21-32.
- Department of Social Development. 2011. Funding for EDCs. [Online] available: [http://www.dsd.gov.za/index.php?option=com\\_content&task=view&id=95](http://www.dsd.gov.za/index.php?option=com_content&task=view&id=95) (22/08/2011).
- De Zeeuw, H., Guendel, S., Waibe, H. 2002. The integration of urban agriculture in urban policies. Bakker et al (eds). 2002. [Online] available: [www.ruaf.org/reader](http://www.ruaf.org/reader) (23/05/2010).
- Deelstra, T. Guendel, S., Waibel, H. 2000. Urban agriculture and sustainable cities. Bakker et al (eds). 2002. [Online] available: [www.ruaf.org/reader](http://www.ruaf.org/reader) (23/05/2010).
- Diepeveen, S. 2008. Putting Empowerment into Practice: Evaluating the Potential for "Development as Freedom" in the Millennium Villages Project. *Undercurrent Journal*, 5 (1): 6-13.
- Dijk, T. 2011. Livelihoods, capitals and livelihood trajectories: a more sociological conceptualisation. *Progress in Development Studies*, 11 (2): 100-117.

- Drakakis-Smith, D. 1991. Urban Food Distribution in Asia and Africa. *The Geographical Journal*, 157 (1): 51-61.
- Drakakis-Smith, D. 1992. And the cupboard was bare: food security and food policy for the urban poor. *Geographical Journal of Zimbabwe*, 23, 38–58.
- Drakakis-Smith, D. 1993. Food security and food policy for the urban poor in J. Dahl, D. Drakakis-Smith, A. Narman (eds.). *Land, Food and Basic Needs in Developing Countries*. Goteburg, NADG.
- Drescher, W. 2001. *The German allotment gardens – a model for poverty alleviation and food security in Southern African cities*. Baudoin & Vink (eds.): 159-68.
- Drimie, S. Mini, S. 2003. *Food security and sustainable development in Southern Africa*. Integrated Rural and Regional Development Research Programme, Occasional paper 6. Cape Town: Human Sciences Research Council.
- Eberhard, R. 1989. Urban agriculture: *The potential for Cape Town – Summary Report*. Working Paper 89/E1, Cape Town: Town Planning Branch.
- Elhadary, Y., Samat, N. 2011. Political Economy and Urban Poverty in the Developing Countries: Lessons Learned from the Sudanese Experience. *Journal of Geography and Geology* 3 (63-76).
- Ellis, F., Sumberg, J. 1998. Food production, urban areas and policy responses, *World Development*, 26(2): 213–225.
- Emmett, T. 2000. Beyond community participation? Alternative routes to civil engagement and development in South Africa. *Development Southern Africa*, 17 (4): 501-518.
- Eyben, R., Napier-Moore, R. 2009. Choosing words with care? Shifting meanings of women’s empowerment in international development. *Third World Quarterly*, 30 (2): 285–300.
- Featherstone, P. 2005. *The soil for life food gardens programme*. Workshop urban micro-farming and HIV-AIDS: Cape Town.
- Food Bank South Africa. 2010. An introduction.
- Gauteng Department of Education. 2001. *Education White Paper 5 on Early Education, 2001: 12*. Government printer: Pretoria.
- Gauteng Department of Education. 2006 . *Vote 5 - Education 2006-07, Budget statement 2: National Treasury*, Pretoria.
- Gauteng Department of Health. 2006. *Vote 4 - Education 2006-07, Budget statement 2:*

National Treasury, Pretoria.

Gauteng Province Department of Economic Development, 2010. *A strategy for a developmental green economy for Gauteng, Preliminary report (Draft)*. Government Printer: Pretoria.

Glover, T. 2004. Social capital in the lived experiences of community gardeners. *Leisure Sciences*, 26: 143–162.

Glover, T., Parry, D., Shinew, K. 2005. Association, Sociability, and Civic Culture: The Democratic Effect of Community Gardening. *Leisure Sciences*, 27: 75-92.

Green, M., Hulme, D. 2005. From correlates and characteristics to causes: thinking about poverty from a chronic poverty perspective. *World Development*, 6: 867–79.

Greenberg, S. 2006. *Urban food politics, welfare and resistance: a case study of the southern Johannesburg metro*. Centre for Civil Society: 1-32.

Hartshorne, S. 2011. Growing vegetables and young minds in a very unexpected setting, *The Star*: 10.

Hassen, E. 2011. The National Development Plan will end poverty in South Africa by 2030 – Really? [Online] available: <http://sacsis.org.za/site/article/785.1> (15/11/11).

Hendricks, B. 2011. Urban livelihoods and institutions: towards matching institutions for the poor in Nairobi's informal settlements. *International Development Planning Review*, 33 (2): 111-146.

Holland, L. 2004. Diversity and Connections in Community Gardens: a contribution to local sustainability. *Local Environment*, 9(3): 285-305.

Holmgren, D. 2007. *Essence of Permaculture*. Holmgren design services: Australia.

Hovorka, J. 2002. Gender and urban agriculture: emerging trends and areas for future research. [Online] available: [www.ruaf.org](http://www.ruaf.org) (01/05/10).

Hovorka, A. 2005. The (re) production of gendered positionality in Botswana's commercial urban agriculture sector. *Annals of the Association of American Geographers*, 95(2), 294–313.

Jarlov, L., 2001: Why we need New Urban Planning Concepts, *Urban Agriculture Magazine*, July 2001, Consultants in Development Programmes (ETC), Netherlands.

Karaan, M. 2001. *Urban horticulture in the Cape Metropolitan Areas: an appraisal of activities and institutional support*. Baudoin & Vinks (eds): 126-35.

Karann, A., Mohammed, N. 1998. The performance and support of food gardens in some townships of the Cape Metropolitan Area: an evaluation of Abalimi Bezekhaya. *Development Southern Africa*, 15: 67–83.

Kilby, P. 2006. Accountability for Empowerment: Dilemmas Facing Non-Governmental Organizations. *World Development*, 34 (6): 951-952.

Kingsley, J., Townsend, M. 2006. Dig in' to social capital: community gardens as mechanisms for growing urban social connectedness. *Urban Policy and Research*, 24: 525–537.

Koc, M., Macrae, R., Mougeot, L. J. A. and Welsh, J., 1999 (eds.) *For Hunger-Proof Cities: Sustainable Urban food Systems*. International Development Research Centre (IDRC): Canada

Laverack, G. 2001. An identification and interpretation of the organizational aspects of community empowerment. *Community Development Journal*, 36(2): 134-145.

Lyons, M., Smuts, C., Stephens, A. 2001. Participation, Empowerment and Sustainability: (How) Do the Links Work? *Urban Studies*, 38 (8): 1233–1251.

Lynch, K., Binns, T., Olofin, E. 2001. Urban agriculture under threat: the land security question in Kano, Nigeria. *Cities*, 18: 159-71.

Madaleno, I. 2000. Urban agriculture in Belem, Brazil, *Cities*, 17(1): 73–77.

Madni, A. 2007. Transdisciplinary: reaching beyond disciplines to find connections. *Society for Design and Process Science*, 11 (1): 1-11.

Malhotra, A., Ruth, S., Boender, C. 2002. Measuring Women's Empowerment as a Variable in International Development. Background Paper Prepared for the World Bank Workshop on Poverty and Gender: New Perspectives.

Maudlin, I., Holmes, P., Miles, M. 2004. *The Trypanosomiases*. UK: CAB International.

Maxwell, D., Levin, C., Csete, J. 1998. Does urban agriculture help prevent malnutrition? Evidence from Kampala. *Food Policy*, 23 (5): 411–424.

Maxwell, D. 2002. The importance of urban agriculture in food and nutrition. [Online] available: [www.ruaf.org](http://www.ruaf.org) (01/05/10).

Mair, J., Marti, I. 2004. *Social Entrepreneurship research: a source of explanation, predication and delight*. IESE Business School University of Navarra: Barcelona Spain.

May, J., Rogerson, C. 1994. How green is your garden? *Indicator South Africa*, 11 (3): 89-96.

Mbembe, A. 2001. *On the postcolony*. University of California Press: Berkeley and Los Angeles, California.

Mbiba, B. 1994. Institutional responses to uncontrolled urban cultivation in Harare: prohibitive or accommodative? *Environment and Urbanization*, 6: 188-202.

McArthur, A. 1995. The active involvement of local residents in strategic community partnerships, *Policy and Politics*, 23: 61–71.

McNall, M., Sturdevant, C., Brown, R., Allen, A. 2008. Brokering Community-University Engagement. *Innov High Educ*, 33:317–331.

Meikle, S. 2002. *The urban context and poor people*, in Rakodi and Lloyd Jones (eds), 37–51.

Metroaginnoversity. 2009. *Introduction to Synthesis Report as Background to 13 November 2009*: 1-11.

Mlozi, M. 1996. *Urban Agriculture: Vegetable production in metropolitan greater Vancouver district in Canada*. Sokoine University of Agriculture.

Montessori, M. 1964. *The Montessori Method*. New York: Schocken Books.

Mosedale, S. 2005. Policy arena: assessing women's empowerment: towards a conceptual framework. *Journal of International Development*, 17: 243-257.

Moskow, A. 1999. The contribution of urban agriculture to gardeners, their households, and surrounding communities: The Case of Havana, Cuba in M. Koc, et al. (eds.), *For Hunger-Proof Cities: Sustainable Urban food Systems*. International Development Research Centre (IDRC): Canada.

Motteux, N., Binns, T., Nel, E., Rowntree, K. 1999. Empowerment for development: taking participatory appraisal further in rural South Africa. *Development in Practice*, 9 (3): 261-273.

Mougeot, L.J.A. 1991. *For Self-reliant Cities: Urban Food Production in a Globalizing South*. Canada: International Development Research Centre.

Mougeot, L.J.A. 1994. African city farming from a world perspective. Egziabher et al. (eds). 1994: 1-24.

Mougeot, L.J.A. 2002. Urban agriculture: definition, presence, potential and risks. Bakker et al (eds.) [Online] available: [www.ruaf.org](http://www.ruaf.org) (01/05/10).

Mulgan, R. 2003. *Holding power to account: Accountability in modern democracies*. New York: Palgrave MacMillan.

Nugent, R. 2002. The impact of urban agriculture on the household and local economies. Bakker et al., (eds.) [Online] available: [www.ruaf.org](http://www.ruaf.org) (01/05/10).

Oxaal, Z., Baden, S. 1997. *Gender and empowerment: definitions, approaches and implications for policy. Briefing prepared for the Swedish International Development Cooperation Agency (Sida)*. Institute of Development Studies: Brighton

Parnell, S. 2004. *Constructing a developmental nation - the challenge of including the poor in the post apartheid city. Overcoming Underdevelopment in South Africa's Second Economy* Jointly hosted by UNDP, HSRC and DBSA: 1-21.

Parnell, S., Robinson, J. 2006. Development and Urban Policy: Johannesburg's City Development Strategy. *Urban Studies*, 43, (22): 337–355.

Pieterse, J. 2000. My Paradigm or Yours? Alternative Development, Post-Development, Reflexive Development. *Development and Change*. Institute of Social Studies, 29: 34-373. Oxford: Blackwell Publishers Ltd.

Pillay, U. 2004. Towards alternative conceptions of local economic reform in the developing world: The case of South Africa. *South African Geographical Journal*, 86 (1): 39–49.

Pillay, U. 2008. Urban Policy in Post-Apartheid South Africa: Context, Evolution and Future Directions. *Urban forum*, 19: 109-132.

Porter, S. de Wet, J. 2009. Who will guard the guardians? Amartya Sen's contribution to development evaluation. *Development in Practice*, 19 (3): 288-299.

Project STAR. 2011. [Online] available: <http://www.reduceclassizenow.org/research.htm#star> (22/08/2011).

Rakodi, C. 1999. *Urban Governance, Partnership and Poverty: An Overview of the Research Issues*, theme paper 8 for ESCOR Commissioned Research on Urban Development, University of Birmingham, Urban Governance, Partnership and Poverty Programme.

Ravallion, M. 2007. Urban poverty. *Finance and Development*, 44(3): 15–17.

Rogerson, C. 1992. Feeding Africa's cities: the role and potential for urban agriculture. *Africa insight*, 22: 229-34.

Rogerson, C. 1996a. Urban poverty and the informal economy in South Africa's economic heartland. *Environment and Urbanization*, 6(1): 167-81.



Rogerson, C. 1996b. Urban cultivation and urban reconstruction in South Africa. *Geographical Journal of Zimbabwe*, 27: 11-20.

Rogerson, C. 1997. *Globalization or informalization? African urban economies in the 1990s*. Rakodi (ed): 337-70.

Rogerson, C. 1998. Urban agriculture and urban poverty alleviation: South African debates. *Agrekon*, 37(2): 171-88.

Rogerson, C. 2001. *Redressing urban poverty in post-apartheid South Africa*. Wilson et al. (eds), 2001: 341-62.

Rogerson, C. 2003. Towards 'pro-poor' urban development in South Africa: The case of urban agriculture. *Acta Academica Supplementum*, 1, 130–158.

Rowlands, J. 1995. Empowerment examined. *Development in practice*, 5 (2), 101-107.

Rudolph, M., Kroll, F., Ruysenaar, S., Dlamini, T. 2008. *A report of food security, poverty, and health in three study areas in Johannesburg, December 2008*. Programme on Urban Food Security: 1-38.

Sachs, J. 2010. *Siyakhana: The social environment of an urban food garden in Johannesburg, South Africa*. MSc, Anthropology, Environment and Development Dissertation.

Sanyal, B. 1987. Urban cultivation amidst modernization. How should we interpret it? *Journal of Planning Education and Research*, 6: 197-207.

SEED (transforming learning through permaculture). 2010. SEED (online). Available: <http://www.seed.org.za/index.php>. [12/12/10].

Sen, A. 1999. *Development as Freedom*. Oxford: Oxford University Press.

SIEHFS (Siyakhana Initiative for Ecological Health and Food Security). 2009. *Project Outline*. The Health Promotion Unit on behalf of University of Witwatersrand, Johannesburg.

SIEHFS (Siyakhana Initiative for Ecological Health and Food Security, a division of the Wits Health Consortium (Pty) Ltd (WHC)). 2010. *Food Gardens Initiative for Primary Schools in the Inner City*. University of Witwatersrand, Johannesburg.

SIEHFS (Siyakhana Initiative for Ecological Health and Food Security). 2011. *The Siyakhana Initiative for Ecological Health and Food Security Annual Report*. University of Witwatersrand, Johannesburg.

Siyakhana Food Garden. 2009. Mission. [Online] available: <http://www.siyakhana.org/website/> (19/04/2010).

- Slater, R.J. 1994. *Urban agriculture: a self-help strategy for women of the urban poor*. BA (Hons) dissertation. Oxford: University of Oxford.
- Slater, R. 2001. Urban agriculture, gender and empowerment: an alternative view, *Development Southern Africa*, Vol 18, No 5, December 2001, Carfax Publishing.
- Smit, J., Nasr, J. 1992. Urban agriculture for sustainable cities: using wastes and idle land and water bodies as resources. *Environment and Urbanization*, 4 (2): 141-152.
- Smit, J.; Ratta, A.; Nasr, J. 1996, *Urban Agriculture*. United Nations Development Programme (UNDP). New York.
- Smith, D., Pyett, P., Clelland, N., McCarthy, L., Whiteside, M., Tsey, K., O'Donoghue, L., Elderton, C. 2007. *Community development and empowerment: a review of interventions to improve Aboriginal health: 1-27*.
- Sonnino, R. 2009. Feeding the City: Towards a New Research and Planning Agenda. *International Planning Studies*, 14 (4): 425-435.
- Southern Africa Food Lab. 2011. *Mamelodi Regeneration Strategy – putting Food Security on the Urban Design Agenda: 1-3*.
- Southern Africa Report. 2011. *South Africa*. [Online] available: <http://www.southernafricareport.com/displaycustomlink.aspx?name=Sa> (23/07/2011).
- Stats SA. 2000. *Measuring Poverty in South Africa*. Pretoria: Government Printer.
- Stats SA. 2005. *Mid-year population estimates 2005*. Pretoria: Government Printer.
- Stats SA. 2010. *P0302 Mid-year population estimates 2010*. Pretoria: Government Printer.
- Sullivan, R. 2008. The living culture whose time has come. *Ecos*, 144: 8-10.
- Swilling, M., Annecke, E. 2006. Building Sustainable Communities in South Africa: the Lynedoch Case Study. *Environment and Urbanization*, 18(2) : 315-332.
- Swilling, M. 2006. Sustainability and Infrastructure Planning in South Africa: a Cape Town case study. *Environment and Urbanization*, 18(1): 23-51.
- Swilling, M. 2010. *Africa 2050 – Growth, Resource Productivity and Decoupling*. Policy brief for the 7<sup>th</sup> meeting of the International Panel for Sustainable Resource Management of the United Nations Environment Programme (UNEP).

Swilling, M. 2010. *Some for all forever? As opposed to: Everything for some for now.* Metroag cocktail.

Tambwe, N. 2008. Urban Agriculture as a Global Economic Activity with Special Reference to the City of Lubumbashi in the Democratic Republic of Congo (DRC). *African and Asian Studies*, 5 (2): 193-213.

Tambwe, N. 2010. *Urban agriculture and food security in the city of Lubumbashi (DRC)*. Faculty of Humanities, School of Social Sciences, Department of Sociology, University of the Witwatersrand. Doctor of Philosophy (PhD).

TasteMag. 2011. *Seeds of Change*. [Online] available: <http://www.tastemag.co.za/Puttingback-305/Seeds-of-change.aspx>. (25/06/2011).

Tinsley, J. 2003. Urban Agriculture and Sustainable Livelihoods. *Peace Review*, 15:3: 295–299.

Thomaz, C. 2009. Housing development on track for 2010. [Online] available: <http://www.engineeringnews.co.za/article/housing-development-gearing-for-early-2010-occupation-2009-07-31> (28/11/2010).

Tonkiss, F. 2003. The ethics of indifference: community and solitude in the city. *International Journal of Cultural Studies*, 6(3): 297-311.

Trefon, T. 2009. Hinges and fringes conceptualising the peri-urban in central Africa. In Locatelli, F., Nugent, P. (eds), *African Cities – competing claims on urban spaces*. Leiden, Boston: Brill.

UN-HABITAT. 2010. State of the world's cities 2010/2011. *Bridging the urban divide*. Rome, Italy.

Wayburn, L. 1985. Urban gardens. A lifeline for cities? *The Urban Edge*, 9(4): 6.

Webb, N. 1996. "Urban agriculture": advocacy and practice: a discursive study with particular reference to three Eastern Cape centres. Unpublished PhD dissertation. Grahamstown: Rhodes University.

Webb, N. 1998. Urban agriculture: environment, ecology and urban poor. *Urban forum*, 9(1): 95-107.

Webb, L. 2000. Food-gardens and nutrition: three Southern African case studies. *Journal of Family Ecology and Consumer Sciences*, 28: 61–67.

White, S. 1996. Depoliticising development: the uses and abuses of participation. *Development in Practice*, 6(1): 6-15.

Wills, J., Chinemana, F., Professor Rudolph, M. 2009. Growing or connection? An urban food garden in Johannesburg. *Health Promotion International*: 1-9.

Windberg, 2001: Executive summary of Urban Agriculture in South Africa, *Urban Agriculture Magazine*, July 2001, Consultants in Development Programmes (ETC), Netherlands. Available [online]:  
[www.ruaf.org/files/econf4\\_submittedpapers\\_windberg.pdf](http://www.ruaf.org/files/econf4_submittedpapers_windberg.pdf). (01/01/2010).

Wits Health Promotion Unit in collaboration with The Wits Commercial Enterprise Pty (Ltd) on behalf of The University of the Witwatersrand, Johannesburg (Wits HPU). 2008. The Siyakhana Permaculture Food Garden Initiative.

WITS Health Promotion Unit Food Garden Project, Bezuidenhout Park (Wits HPU Food Garden Project). 2009. *Site Development Proposal to Jo'burg City Parks*. University of Witwatersrand, Johannesburg.

Wits Health Consortium, 2011. *Wits Health Consortium*. [Online] available:  
<http://www.witshealth.co.za/Pages/default.aspx> (19/02/2011).

World Bank. 2007. *World Development Report 2007, Development and the next generation*. The World Bank, Washington.

You Tube. 2011. Siyakhana Food Garden Bezuidenhout Valley. [Online] available:  
<http://www.youtube.com/watch?v=z7w4sUHU1IQ> (23/08/2011).

You Tube. 2011. TEDx Johannesburg – Mandla Tshabalala – Garden of Dreams. [Online] available:  
<http://www.youtube.com/watch?v=yf56xKEL72Q&playnext=1&list=PL77EE3D9BBB1E7A81> (23/08/2011).

Zadeh, B., Ahmad, N. 2010. Social development, community development and participation. *Journal of US-China Public Administration*, 7(1): 1-5.



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## Appendixes

### Appendix 1. Interview Schedules

#### In-depth interview schedule - ECDCs

##### 1. Personal Details

What is your age?

What is your Home/Native Language?

Where is your home town?

What is your marital status?

How many dependents do you have?

What are the ages of these dependents?

What teaching qualifications do you have?

How many years have you been a Principal?

What did you do before you became a teacher/Principal?

##### 2. Facility details

How long have you been at the current facility?

How many teachers work at the facility? Please divide these into teachers and cleaning, cooking or administrative staff?

How many children do you have at your ECDC?

Do you expect this number to increase in 2011?

If you could make changes to your school, what would these changes be?

What do you need to help make these changes?

Do the parents of the children know that you are involved with the Siyakhana initiative? If yes, how do you inform the parents? If no, why do the parents not know?

How many children in your school are subsidised?

Do you receive any funding from the Department of Social Services and Education/any other funder for your ECDC? If yes, please explain to me what this funding is for, how you use it, and how you provide feedback to the department on your use of these funds? If no, please explain why you are unable to receive a grant from the Government/funders?



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### 3. Involvement in project

How long have you been involved in the project?

Why did you get involved in the project?

Do you contribute (in monetary terms) to the project in any way?

Do you feel that your ECDC benefits in any way through the involvement in the project (other than from the food deliveries?)

Have you heard about the Twilight NGO?

Do you have a specific role within the Siyakhana group? Please can you explain to me your responsibilities in terms of this role?

How often do you meet with the other members of the Siyakhana group?

When you meet, who is responsible for organising these meetings?

How are these meetings communicated to you?

If the meetings are in the garden, how do you get to the meetings?

When you meet these members, where do you meet and in what context do you meet? (As the Siyakhana group or within the ECDC forum context)

What are the reasons for the amount of times that you meet with the other members of the Siyakhana group?

What do you discuss when you meet with the other members of the Siyakhana group?

Do you feel that you meet the other members of the Siyakhana group sufficiently to discuss the project?

Have you visited the garden over the past year?

Have you told your friends and family about the garden?

Since the beginning of the project, do you think that there have been changes in the garden and/or the project? If so, please explain these changes to me.

If you could change anything within the project, what would that be?

What is your vision for the project for 2011?

Are you happy with the management of the project?

Would you be interested in seeing the financials and accounts from the project?

#### **If the respondent has not visited the garden:**

What are reasons for not visiting the garden?

What are the difficulties associated with visiting the garden?

What support do you need from the project in order to visit the garden on a more regular basis?

Do you volunteer in the garden? Please explain the reasons why you do not volunteer in the garden? What could the project provide you with in order to encourage you to volunteer in the garden?



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**If the respondent has visited the garden:**

How often have you visited the garden in your individual capacity over the past year?  
How often have you visited the garden with the teachers and children over the past year?  
How many children did you take with you to the garden and the reasons?  
How many teachers did you take with you to the garden and the reasons?  
How did you get to the garden? (Public transport, own car)  
Where did you get the funds from to visit the garden?  
How long did you stay in the garden?  
What did you do in the garden?  
What do you think the benefits to the ECDC of visiting the garden are?  
What are the difficulties associated with visiting the garden?  
What support do you need from the project in order to visit the garden on a more regular basis?  
Do you volunteer in the garden? If yes, please explain to me how you volunteer and how often you volunteer in the garden? If no, please explain the reasons why you do not volunteer in the garden? What could the project provide you with in order to encourage you to volunteer in the garden?

4. Training opportunities

Since the beginning of the project, what training programmes have you attended at the garden?  
For each of these trainings, please can you explain to me what you learnt?  
How are you informed of the training opportunities?  
Have you had to pay for any of these training opportunities?  
Do you feel that the trainings are beneficial and applicable to your life?  
Do you think that the trainings received have helped you understand permaculture principles?  
Are you involved in urban agriculture in either your home? If yes, please explain to me the reasons for your involvement in urban agriculture and the type of produce you grow? If no, please explain to me why you have not embarked on any urban agriculture initiatives?  
Are you involved in urban agriculture at the ECDC? If yes, please explain to me the reasons for your involvement in urban agriculture and the type of produce you grow? If no, please explain to me why you have not embarked on any urban agriculture initiatives?  
Do you feel that you have sufficient knowledge to implement an urban agriculture initiative in your home or ECDC?  
In the future, what would you like to receive further training on?

5. Deliveries and food



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How much money do you spend on average per month on food for the ECDC?  
Where do you source this food from? Street, wholesaler, supermarket?  
What are the reasons for procuring your food from these sources?  
How often do you receive food from the garden?  
Do these deliveries take place at the same time and day every week?  
For the past year, have the deliveries been consistent? If not, please explain the differences between the deliveries between the first half of the year and the second half of the year?  
What can these differences be attributed to?  
Who delivers the food to the ECDC?  
Do you know the people who deliver the food at the ECDC?  
Do you interact with these people upon delivery of the food?  
What type of produce do you receive from the garden?  
Have there been differences in the type of food delivered over the period of the past year?  
Is all the food that is delivered to your ECDC edible? If not, what is the percentage that is not edible and why is it not edible?  
What do you do with the food that is delivered?  
How many meals does the food from the garden provide the ECDC with?  
Do you receive other products from the garden such as herb salts? What is the frequency with which you receive these products?  
Do you feel that the food received from the garden supplements and assists in the provision of food for the ECDC on a weekly basis?  
Have you thought about bulk purchasing with the other members of the Siyakhana group? If so, what are the timelines for implementation? If not, what are the barriers to such pooled procurement?





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## **In-depth interview schedule – Gardeners**

### **1. Personal Details**

What is your age?  
What is your Home/Native Language?  
English proficiency (Intermediate/Advanced)?  
Where is your home town?  
What is your marital status?  
How many dependents do you have?  
What are the ages of these dependents?  
How many years have you been a gardener?  
What did you do before you became gardener?

### **2. Garden and project details**

How long have you been involved in the project?  
Why did you get involved in the project?  
Did you start as a volunteer, or were you appointed on a full time basis immediately?  
Please can you explain to me a typical day in the garden (as per your roles and responsibilities?)  
Do you have a specific role within the garden? Please can you explain to me your responsibilities in terms of this role?  
Where do you live?  
How far is this from the garden?  
How do you get from your place of residence to the garden?  
Why do you choose to live in this particular residence?  
How often do you get food from the garden?  
How much food is this?  
What do you do with the food that you take home from the garden?  
What type of produce do you take?  
Is the amount of produce taken from the garden by the gardeners recorded?  
For you, what do you feel are the main benefits of urban agriculture?  
What are your plans for the future of the garden? Please explain to me in both terms of permaculture and infrastructure?  
Do you still think that a telephone in the garden would be a good way to generate funds?  
Can you explain what steps have been taken in order to pursue this idea?  
Do you have electricity in the garden? (Do you still use the solar cooker?, If not, what do you use your solar energy for?)  
Have you had any security incidents in the past year?



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### 3. Involvement in project

How long have you been involved in the project? (This is not the same question as how long have you been a gardener).

Can you explain to me the changes in the garden from when you were first involved to now?

Do your friends know about the project? Do you invite them to see the garden?

In what ways do you feel you benefit through the involvement in the project? (This is different to the benefits of urban agriculture – this is the benefits from involvement in the overall project).

How often do you meet with the members of the Siyakhana group?

When you meet, who is responsible for organising these meetings?

How are these meetings communicated to you?

Are these meetings anywhere else but the garden? If so, how do you get to the meetings?

What are the reasons for the amount of times that you meet with the other members of the Siyakhana group?

What do you discuss when you meet with the members of the Siyakhana group?

Do you feel that you meet the members of the Siyakhana group sufficiently to discuss the project?

If you could change anything within the project, what would that be?

What is your vision for the project for 2011?

Are you happy with the management of the project?

### 4. Training opportunities

Since the beginning of the project, what training programmes have you attended?

For each of these trainings, please can you explain to me what you learnt?

How are you informed of the training opportunities?

Have you had to pay for any of these training opportunities?

Do you feel that the trainings are beneficial and applicable to your life?

Do you think that the trainings received have helped you understand permaculture principles?

Do you practice urban agriculture at your home? (This can be your home in Johannesburg or your hometown). If yes what do you grow? If no, what are the reasons?

In the future, what would you like to receive further training on?

### 5. Visitors

How often do you have visitors in the garden?



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Where do these visitors come from? (Schools, University, ECDC, Local, International, Community member)

#### 6. Deliveries and food

How often do you do the deliveries to the ECDC?

Do you visit the ECDC for any reason other than the deliveries of food? (If so, how did you get to the ECDC? And what funds did you use to get there?)

How long did you stay in the ECDC (this is other than deliveries)?

What did you do in the ECDC (this is other than deliveries)?

What are the difficulties associated with visiting the ECDCs?

What support do you need from the project in order to visit the ECDCs on a more regular basis (other than the deliveries)?

Who drives the bakkie when you do the deliveries?

Has this changed since the beginning of the year?

Are you interested in getting your driver's license? What steps have you taken to follow up on this?

How is it decided which people deliver to the ECDCs?

When you do deliveries, what is the extent of interaction with the Principals/other teachers?

Do you know all of the Principals of the ECDCs on a name basis?

Have there been differences in the type of food delivered over the period of the past year?

What type of produce do you deliver to the ECDCs?

Do all the ECDCs get the same produce (quality and quantity) on a weekly basis?

How often do you deliver products from the garden such as herb salts? Is this dependent on specific factors or circumstances?

## Appendix 2. List of interviewees and dates

| Interview list  | Date of interview |
|---|-------------------|
| <b>ECDCs – Siyakhana group members have been placed under a pseudonym</b> |                   |
| Siyakhana group member one  | 14/12/2010        |
| Siyakhana group member two  | 08/12/2010        |
| Siyakhana group member three  | 02/12/2010        |
| Siyakhana group member four   | 14/12/2010        |
| Siyakhana group member five   | 29/07/2010        |
|   | 05/08/2010        |
|   | 08/11/2010        |
| Siyakhana group member six  | 26/06/2010        |
|   | 08/12/2010        |
| Siyakhana group member seven  | 19/01/2011        |
| Siyakhana group member eight  | 12/08/2010        |
|   | 02/12/2010        |
| <b>Gardeners</b>  |                   |
| Mandla Tshabalala   | 22/10/2010        |
| Patrick Khanye  | 07/12/2010        |
| Sarah Mashala   | 07/12/2010        |
| Dumisani Madumo   | 07/12/2010        |
| George Mahlombe   | 07/12/2010        |
| John Mxumalo  | 07/12/2010        |
| Petros Mcnumu   | 07/12/2010        |
| Promise Hlongwane   | 30/11/2010        |
| <b>Other Siyakhana Staff</b>  |                   |
| Professor Rudolph   | 23/05/2010        |
|   | 20/12/2010        |
|   | 20/01/2011        |
| Tashveer Bodhi  | 23/12/2010        |
| Hlangi Vundla   | 15/03/2011        |
| Moiria Berry  | 08/12/2010        |
|   | 21/01/2011        |



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## **Appendix 3. Participant information sheet**

**English**

### ***Participant Information Sheet***

#### ***Introduction:***

Thank you for meeting with me today I really appreciate your time and involvement in this project. My name is Trixie-Belle Nicolle, and I am a Master's Student at the University of Witwatersrand in Johannesburg, South Africa. This research study is being carried out strictly for academic purposes only.

#### ***What is the aim of the study?***

The aim of this study is to investigate how urban food gardens create opportunities for empowerment. I will be using the Siyakhana Bezuidenhout Park Permaculture project as a case study through which to explore the roles that women play in domestic and community lives and how these inform their participation in the project.

#### ***What will be involved in participating?***

Your involvement in this study is 100% voluntary, and if you decide not to take part, there will be no penalty. You may ask any questions regarding the research. You may discontinue at any time.

Your participation involves taking part in an interview where I will ask you questions and make a note of your response(s). I would like to assure you that your responses will remain confidential and will only be shared with my supervisor. Should I require a quote of any of your responses in my research paper, I will obtain permission from you beforehand.

I would like to invite you to participate in this project, as your input is extremely valuable to me. If you are willing to participate, you will be required to sign a consent form indicating that you have read the information sheet and have decided to take part in the research.

#### ***Questions:***

If you have any questions regarding my research, I would be more than happy to answer. Feel free to contact me by phone at +27 83 327 6080 or by email at [tnicolle@phdist.co.za/tbnicolle@gmail.com](mailto:tnicolle@phdist.co.za/tbnicolle@gmail.com)

You will be offered a copy of this form to keep.



Department of Development Studies, School of Social Sciences  
The University of Witwatersrand,  
Johannesburg, South Africa

## **Sotho**

### ***Tsebisō Ya Motiatsakayolo***

#### ***Lo Qala:***

Ke a lebona lo kopana le lona kaseko, e bile ke lebona le maikemisetso a lona mo projekeng e na. Bitso la ka ke Trixie-Belle Nicolle ke moithuti ho tswa University ya Witswatersrand, ke bile te tswelisa thuto tsa ka pele mo South Africa. Ho batlisisa ka thuto ena ho tobane haholo le batho ba tuteileng fela.

#### ***Ke eng makemisetso a thuto ena:***

Makemisetso a thuto ena ke ho emisa moruho wa naha hodimo ka teng ke tla be ke sebedisa Siyakhana Bezuidenhout Park Permaculture project ka tsela ya thuto ho bona bomme ba gona jhang ho thusa ka e ba tsibisa jwang.

#### ***Ke eng se kenyeditseng ho ba korolo ya se***

Maikemisetso a lona thuto ena a lekana haholo fela e fela ha o dumela ho nka earolo ho ka se be ke ho sotlona. O ka kotsa potsa ha thuto ena B bile O ka B fetisetsa nakong efe hapa B fe. Kenolo ya lona ha o nka sebaka sa moseketsi o ke tla botsa dipotso ke tlitse buka hore ka ho tlaela ho tla nka sebaka sa a hora fela ho tsamaile juang ku ho latela taba e ya mosebetsi ke ka rat hole ditla tsebiwe ke o moholo ho nna fela.

Na nka batla ho tseba se le se entseng mosebetsing o ka formo ena ke tla thola tleta no tsha ho iona pell ke qala. Ke ha rata ha le ha bu karolo projekeng ena ie thuto ya iona e bohlokha ho nna. Ha le ikemiseditse ho ba battatsakaolo o tlamrils ho flatsa fomoro e B bontshang hore O badile karolo ee bontsha kondon.

#### ***Pots:***

Ha o nale potso mabapi le thuto ena ke ka thabela ho o araba. Ha o batla ho letsa se senye nako letsa neng kapa neng ho nomoro ee latelang +27 83 327 6080/ [tnicolle@phdist.co.za](mailto:tnicolle@phdist.co.za); [tbnicolle@gmail.com](mailto:tbnicolle@gmail.com).

O tha fiwa e ngwe ya pampiri ya fomoro e na ho ba ya hao.



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**Zulu**

### ***Umqhulu wolwazi lwabathathiqhaza***

#### ***Isaziso:***

Nginyanibonga ukuhlangana nami namhlanje ngiyathakasela isikhathi senu nokuzibandakanya kuloluhlelo. Igama lami ngingu Trixie-Belle Nicolle, futhi ngiqhubekisa iziqu zezifundo zami enyuvesi yase Witwatersrand egoli Eningizimu – Africa . Loluphando lwesifundo lunganywelwe abezemfundo kuphela.

#### ***Iyini inhloso yalesisifundo ?***

Inhloso yalesifundo ukuphandisa ukuthi ngabe utshalo lokudla ngendlela yasemadolobheni ephucuzekile lungenza amathuba okunikezela amandla. Ngizosebenzisa uhlelo lwe Siyakhana Bezuidenhout Park Permaculture njengomzekelo wesifundo lapho sizobhekisa indima abesifazane abangayidlala ezimpilweni emakhaya nasemphakathini nokuthi lokhu kungaziswa kanjani abathathiqhaza kuloluhlelo.

#### ***Yini ezobandakanyeka ekuthatheni iqhaza?***

Ukuzibandakanya khwakho kulesisifundo kuncike kuwe kuphela, okunye uma unquma ukungabi ingxenye, ungeke uthole sijeziso. Ungabuza noma ngonjani Umbuzo ngaloluphandisiso. Ungayekela ukuzimbhandakanya noma kunini kuloludaba.

Iqhaza lakho libandakanya ukuthatha ingxenye ekubeni ubuzwe imibuzo eyingcosana mina ngilobe phansi izimpendulo zakho. Ngingalandelisa ngibuye ngikubuze uma uphandisiso luqhubeka. Ngithanda ukukuthembisa ukuthi izimpendulo zakho zizohlala ziyimfihlo kodwa ngizozinikezela nakongiphetheyo.

Uma kungenzeka ngisebenzise enye yezimpendulo zakho kuphandisiso lami, ngizodinga ukuthola imvume kuqala kuwe. Uma unogqozi ekuzimbhandakanyeni, kudingeka ucikice iphepha lesivumelwano esichaza ukuthi ufundile okulotshwe phansi nokuthi ufuna ukuba yingxenye kuloluphando.

#### ***Imibuzo:***

Uma uneminye imibuzo mayelana naloluphandisiso lwami, ngingajabula kakhulu ukuyiphendula Khululeka ungithinte kulezizinombolo 27 83 327 6080 noma email: [tnicolle@phdist.co.za](mailto:tnicolle@phdist.co.za)/[tbnicolle@gmail.com](mailto:tbnicolle@gmail.com)

Uzonikezwa ikhophi yefomu okumele uyilondoloze.



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## Appendix 4. Formal Consent Form

### English

#### *Formal Consent Form*

I \_\_\_\_\_, have understood the objectives of this study. I understand that I am free to withdraw from the study at anytime without prejudicing any current access to facilities. I also understand that I will receive no form of remuneration for my involvement in this study.

By signing below, I agree to participate in this study:

\_\_\_\_\_  
(Signature of Participant)

\_\_\_\_\_  
(Date)

### Sotho

#### *Malao o gathalele foromo ena*

Ke \_\_\_\_\_, bile ke hlalohanya maikemisetso a thuto ena. Ke hlalohanya hore nka intsha fela le fela mo thutong ena na ke batla ka ntle le ho sa botse ba haufi le nna. Ke bile ke hlalohanya hore ke ke be ka fumana le e seng moputso ka ho ikenya thuto ena thuto e.

Ke a dumela ho ba motlatsa karola thuto e na.

\_\_\_\_\_  
(Sefane sa motho yo o dumetseng)

\_\_\_\_\_  
(Letsatsi)





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**Zulu**

***Ifomu elisemthethweni lesivumelwano***

Mina \_\_\_\_\_ngiqondile okuhloswe ngalesisifundo. Ngiqonda ukuthi ngivunyelwe ukuhoxa noma kunini ngaphandle kokukhishwa inyumbhazane ukuba ngisebenzise amathuba akhona. Ngiyazi ukuthi angeke nithole noma ngebe ngayiphi indlela umvuzo ngokuzibandakanya kulesisifundo.

Ngokucikica ngezansi, kusho ukuvuma ukutha iqhaza kulesifundo

\_\_\_\_\_  
(Ukusayinda kothatha iqhaza)

\_\_\_\_\_  
(usuku)



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Johannesburg, South Africa

## **Appendix 5. Individual consent to disclosure of name of ECDC**

### **Individual's consent to disclosure of name in research report**

I \_\_\_\_\_ (name of individual), do hereby authorise Trixie-Belle Nicolle of The University of the Witwatersrand, Johannesburg, South Africa to disclose the name of my ECDC, to be used only for the purpose of the submission of a MA thesis on "Urban food gardens and empowerment".

By signing below, I agree to have the name of my ECDC disclosed in the report:

\_\_\_\_\_  
(Signature of individual giving consent)

\_\_\_\_\_  
(Date)