

# **“The Sustainability Institute’s Cookbook: Recipes for Food and Community Building”**

by

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*Thesis presented in partial fulfilment of the requirements for the  
degree of Master of Philosophy in Sustainable Development in the  
Faculty of Economic and Management Sciences at Stellenbosch*



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March, 2016

## **Declaration**

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Eduardo Shimahara

Date: March 2016

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## **Abstract**

The Sustainability Institute in Stellenbosch South Africa is an institution dedicated to teach and promote sustainable development through different courses. Postgraduate, Masters and even PhD courses are offered in partnership with Stellenbosch University to students that come from many different countries.

This participatory action research (PAR) project aims to investigate the role of food at the Sustainability Institute. Quantitative research and semi- structured interviews are used in order to understand what this institution consumes when it comes to food, and how the decisions about what to buy and/or consume are taken.

Then, with the use of a Brazilian methodology (Elos) as a roadmap to PAR, all the staff at the Sustainability Institute are invited to play a game where they cook together and share the food in order to bring about reflection and action on this important theme relating to sustainable development.

## Opsomming

“Die Volhoubaarheidsinstituut op Stellenbosch is ’n instelling wat toegewy is aan onderrig oor én die bevordering van volhoubare ontwikkeling deur verskillende kursusse. Nagraadse, magister- en selfs PhD-kursusse word in vennootskap met die Universiteit Stellenbosch aan studente van ’n wye verskeidenheid lande aangebied.

Hierdie projek van deelnemende aksienavorsing (PAR) is daarop afgestem om die rol van voedsel in die Volhoubaarheidsinstituut te ondersoek. Kwantitatiewe navorsing en semigestruktureerde onderhoude word gebruik om die instelling se kosverbruik te verstaan, en te begryp hoe besluite oor wat om te koop en/of te verbruik, geneem word.

Daarna word ’n Brasiliaanse metodologie (Elos) as roetekaart vir deelnemende aksienavorsing toegepas om alle personeellede van die Volhoubaarheidsinstituut te nooi om aan ’n spel deel te neem waar hulle saam kos voorberei en dit dan deel ten einde besinning en aksie oor hierdie belangrike tema in verband met volhoubare ontwikkeling teweeg te bring.”

## Acknowledgements

There's a very simple quote attributed to Paul Cezanne, although the exact register is difficult to track: "The day is coming when a single carrot, freshly observed, will set off a revolution."

It is my belief that food is at the center of a potential revolution, or evolution if you like. A story of going "back to the future" where the act of harvesting, preparing and sharing a meal will need a collaborative effort and to sit around a table will bring communities together, again.

This thesis is also a collaborative effort that started the day when Luke Metelerkamp accepted to be my supervisor and Mark Swilling and Eve Annecke decided to open the heart and guts of the Sustainability Institute for me to dive in.

Although simple, this work of PAR would never be possible without the help and commitment of my small family. To my wife Tatiana Iversson Piazza and my daughter Zoe Piazza Shimahara, my deepest gratitude.

I am grateful for the fact that I am at the right place, at the right time, surrounded by the right people. I am here and now.

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## List of Acronyms and Abbreviations

- AGRA – Alliance for a Green Revolution in Africa
- CSA – Community supported agriculture
- FAO – Food and Agriculture Organization of the United Nations
- GHG – Green house gases
- GMO – Genetically modified organism
- GR – Green revolution
- GRI – Global Reporting Initiative
- HEI – High external input [agriculture]
- IAASTD – International Assessment of Agricultural Knowledge,  
Science and Technology for Development
- IFOAM - International Federation of Organic Agriculture Movements
- IPCC – Intergovernmental Panel on Climate Change
- LDC - Lynedoch Development Company
- MEA - Millennium Ecosystem Assessment
- NGO – Non-governmental organization
- PAR – Participatory action research
- SI – Sustainability Institute
- TD – Transdisciplinary Research
- UN – United Nations
- USDA – United States Department of Agriculture



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## Chapter 1 – Introduction

### 1.1 Background and motivation

What did you eat today?

The answer to this seemingly innocent question can be full of contradictions. Stopping to think about what's on our plate can lead to deep reflection on the consequences of our simplest acts.

Before going any further, I would like to share a bit of my personal history that will likely influence my views in this research.

About 30 km away from the city of São Paulo in Brazil is the city of Cotia, the location of the largest Buddhist temple in South America, called the Zu Lai temple. The temple conducts an annual retreat of absolute silence, where participants stay quiet for four days, taking part in monastic activities such as the cleaning of the complex plus several daily meditation sessions. One of the most important moments of the day is when everyone shares a meal. Sitting around a common table, each participant eats in absolute silence; there is no talking or any other kind of sound produced by cutlery or cups placed on the table. The simple task of trying not to produce any sound keeps the mind in the present. And when the meal is eaten, full attention is paid to the food itself. After the meal, warm water is poured over the individual bowls, and each participant is asked to mix the water and any food that has been left in the bowl, and eat it as a soup. After this ritual, the bowl must be spotlessly empty.

When I attended this retreat, one of the monks asked to speak at this time (on rare occasions the monks leading the retreat are allowed to speak while the participants listen). "I come from China," she said. "In my country, we are more than one billion inhabitants. If each of us wastes a single grain of rice at every meal, I can imagine what the total waste throughout our lives would be. Can you?" The profound truth of her words awoke in me a feeling that indeed, I had never paid attention to the impacts of the simple act of eating. The year was 2006.

The next few years passed and I found myself obliged to study the subject because I received a mission from the chairman of the universities where I worked for almost 10 years, to found a small group of employees aiming for innovation and sustainability. Thus was born the Sustainability and Innovation core as part of

Anima Education (Anima Educação, 2015) in Brazil, which today has more than 150,000 student members spread across five states. This small group's activities have two distinct focuses, however they are intimately connected: corporate issues such as the GRI sustainability-reporting format (Global Reporting, 2015), and the inclusion of innovation and sustainability in some way within the more than 40 different curricula offered by the three universities that were part of the group.

During the years I worked in the group, I had to manage my studies virtually on my own, despite having the support of numerous experts in various areas that make up this mosaic called "sustainable development" and also in the area of corporate social responsibility. My personal interest is in human-scale changes that we could include in our day-to-day activities.

Influenced by readings from authors such as Vandana Shiva, Tristran Stuart, Michael Braumgart, Janine Benyus, Fritjof Capra and others, I became vegetarian. The main reason for this decision was seeing the environmental impact of the expansion of pasture in Brazil to raise cattle. According to studies on the deforestation of the largest tropical forest in the world, consumption of beef cattle raised in Brazil in free-range mode uses an area of 1 hectare or 10,000 square meters for each animal, and Brazil has more than 180 million cows (Rivero & Almeida et al., 2009). From this initial spark, it didn't take long before I looked at my meals thinking about the route and consumption of natural resources required to assemble them.

The theme of sustainable development is extremely comprehensive and complex, as we discuss in Chapter 2 of this thesis. However, I believe that within this immense complexity, simple actions can be incorporated in our day-to-day activities. I am greatly inspired by the small actions of ordinary citizens; micro revolutions that over time have brought major changes. It is in this spirit that I began this research, where I became part of a sustainability transformation through food.

The choice of the Sustainability Institute (SI) as a case study occurred for three main reasons. The first is due to the context in which this institution is placed. The village of Lynedoch, described as a "mini South Africa" (Ringelberg, 2013) offers diversity and a complex multi-layered context: social, cultural, and intellectual. The second reason is accessibility. Having chosen the Sustainability Institute as the place in which to participate in a Master's course over two years, makes me

feel like part of the community. In just a few steps I can hear the stories of several characters that are part of this context. Thirdly, through conversations with various members of the institute, I have realised that food is not at the centre of discussions held in Lynedoch and at the Sustainability Institute (this statement is explored in Section 3.5.1).

This thesis is not only the work of two years. It is an essay of my thoughts and concerns over the last two years and was built by many meetings, agreements and disagreements, and decisions I've made so far in my life.

## **1.2 Problem statement**

The Sustainability Institute in South Africa is one of the continent's leading research and teaching facilities on the subject of sustainable development. Sustainable development is a broad theme that is taught through various educational modules at the SI (explored in Section 3.5.1). Within some of these modules, food is "explored" in theoretical ways, but the food served at the institution is not a living example of sustainable development, according to informal interviews. Thus there is a separation between theory and practice. Food and sustainable development are deeply intertwined (explored in Chapter 2), and the food served at the institution should reflect the teaching on sustainable development, and play more of a central role.

## **1.3 Research objectives**

This research aims to deeply analyse the food system at the SI, and then propose and implement solutions to align the theoretical knowledge with practical actions. In doing so, this research seeks to bring food to the centre of discussions at the SI in order to develop a strategy for change for the future. The goal is for the relationship between people who work at the SI and the food served there to become a practical example of a more sustainable food system, which complements the SI's education on sustainable development.

Put simply, the research seeks to:

1. Try to understand the current state of the SI's food system in terms of its alignment with the SI's values (i.e. providing education for a more sustainable world).
2. Explore ways of improving the SI's food system through the engagement of

all its employees.

3. Create a list of recommendations, implementing whatever is possible during the writing of this thesis.

In order to meet these objectives, the following questions are posed:

- (a) As an institution dedicated to the teaching and practice of sustainable development, what food is consumed at the Sustainability Institute, and what is the role of food there?
- (b) How can a simple cookbook, created and shared by the Sustainability Institute's community, be used to promote reflection on the use and role of food at this institution?

To answer question (a) it will be important to better understand the flow of food through the food system at the SI, investigating where the food comes from, how it is processed and to whom it is served. During 90 days all the food bought into the SI will be listed altogether with its origins and prices. It is also crucial to study when and how the topic of food is addressed in class, to check the alignment or misalignment between the theoretical (the themes and approaches taught in class) and the practical (the food served to the SI community).

To answer question (b) it is essential to explore new ways in which food can be used in the process of building community. Instead of a top-down approach, the collective building process of a cookbook invites people to reflect on food, talk about food, and eat together, possibly sharing personal stories and memories, and improving the relationship between people themselves and between people and their food.

A detailed research methodology is provided in Chapter 3.

## 1.4 Clarification of concepts

**Organic agriculture:** Organic agriculture is the kind of soil cultivation, which has as its basic principle the protection of nature, by preventing damage to the environment. The production of high quality food is made in conjunction with the protection of biodiversity and care of water (IFOAM, 2013). In this type of farming, fertilizers, herbicides, insecticides or fungicides that have been synthetically produced are not used. Also not allowed are growth hormones or routine antibiotics to increase or accelerate animal growth, nor is the genetic manipulation

of any organism that is part of the production chain (Bavec and Bavec, 2007).

**Biodynamic agriculture:** Created by Austrian philosopher Rudolph Steiner around 1920, biodynamic agriculture is considered by many to be the most advanced and holistic form of organic agriculture on the planet (Biodynamics, 2014). It is called holistic because it takes into account several factors such as the seasons, lunar cycles and even the influence of other planets like Venus and Mercury in the development of the soil and plants (Tompkins and Bird, 1998).

**Cooking sessions:** At the heart of this participatory action research or PAR project (explored in Section 3.3) were cooking sessions, where almost the entire team of the Sustainability Institute cooked recipes created by themselves. Teams were drawn and each team received a specific theme – *Local*, *Family* or *Africa* – and inspired by these themes, sought ingredients to prepare a dish one morning to be shared by the entire team. In total, six sessions were held, which resulted in six recipes.

**Digestion session:** At the end of the cooking sessions, a meeting was held to share some of the data collected on the SI's food system as well as the most relevant points from the cooking sessions, and most importantly, to help the group of SI employees begin to establish the institution's future food system.

**Food processing:** Food processing occurs when food is transformed away from its original shape and natural characteristics, via a vast palette of technologies, equipment and techniques. Simple processing can be removing the husks of a cereal grain, for example, while more complex processing would be cooking food via exposure to water vapor. The packing of food can also be considered a form of processing (Singh and Heldman, 2001; Fellows, 2000).

**Food education:** The concept of food education refers to the idea that as we move further and further away from the origins of food (Patel, 2012), we are also shifting our attention from the origins and impacts of the production chain. In this sense, food education considers more than just the nutritional aspects, but also puts in the centre of the discussion the origin and entire process by which food arrives on the plate (Slow Food International, 2015). It is also a kind of education where participation plays a central role, with students engaged in the whole process of producing food by planting, harvesting, cooking and eating (Stone, 2009).



**Guest house:** Inside the Lynedoch Ecovillage, near to the Sustainability Institute, there is a guest house located in the building of an old hotel. It offers accommodation to teachers, students or visitors to the SI, and has a kitchen adequately equipped to make the meals that are offered to guests, students and the children at the daycare that is also located within the village of Lynedoch.

**Lynedoch ecovillage:** The Lynedoch ecovillage is the first intentional ecological community, designed to contain a socially mixed community of South Africa. The village is located in Stellenbosch, a university town about 30km from the city of Cape Town. Founded in 2000, the Lynedoch Development Company (LDC) is a non-profit company that manages the development of the ecovillage. Lynedoch is based on three original goals: to be a mixed community, organised around a site with a focus on children's education; to be an example of an ecological urban system; and to be economically and financially independent (Sustainability Institute, 2012).

**Sustainable development:** Although it is possible to find many different definitions of "sustainability", it is important to note that the term "sustainable development" first appeared in the literature in a 1987 report (World Commission on Environment and Development, 1987) entitled "Our Common Future", which also received the name "Brundtland Report" due to it having been carried out under the leadership of Gro Harlem Brundtland – former First Minister of Norway. According to this report, sustainable development is development that "meets the needs of present generations without jeopardizing the ability of future generations to meet theirs."

## 1.5 Significance of the study

*"The simple act of feeding ourselves is one of the largest drivers of planet destruction" (Worldchanging, 2009).*

*"The supply and availability of food has been a crucial factor shaping the emergence, development and persistence of human civilizations throughout the ages." (Godfray et al., 2010).*

The future of the global food system between now and 2050 will be affected by main drivers that Godfray et al. (2010) divide into 4 categories: the factors that affect the demand for food, the trends in future supply, exogenous factors such as climate change, competition for water, etc and finally a cross-cutting category

involving food system economics, food wastage and links with health.

Food is far from being a simple subject. The world is immersed in a number of different crises (Swilling and Annecke, 2012) that intertwine, bringing more and more complexity and bigger challenges. When it comes to food, however, it seems that the main crisis is food security, which is defined as a state when “all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (World Health Organization, 2015). The concept of food security is built on three pillars that address: food availability or sufficient quantities and food available on a consistent basis; food access or having enough resources to obtain appropriate foods for a nutritious diet; and finally, the appropriate use of food based on knowledge of basic nutrition and care, as well as adequate water and sanitation (World Health Organization, 2015). There is a great deal of debate surrounding food security, with arguments about whether the world produces enough food, the problems of distribution, right through to the production of food for future generations (World Health Organization, 2015).

When we go deeper, we'll find a polarized discussion. On one side there are those who stand for technology to improve food production (Borlaug, 2000) and on the other, those who criticise genetically modified organisms (GMOs) and stand against the use of this kind technology in agriculture. Instead, the latter defend a position where organic food plays a very important role in the future of mankind (Shiva, 2000). Amidst this battle, the relationship between man and food (its origins, development, preparation and consumption) is constantly changing in a way that seems to be increasing the debate.

This thesis aims to offer an experience of this micro universe that could probably represent many other communities around this planet. Lynedoch, the village that accommodates the Sustainability Institute is the first intentional community (i.e. intentionally set out to try and work together to solve ecological and social problems in an integrated way) of South Africa (Swilling and Annecke, 2012). Born from a country torn apart by a system of racial segregation that prevailed until a few decades ago, this small village can be described as a mini South Africa (Ringelberg, 2013). Located within Lynedoch, the Sustainability Institute in turn has been named in a recent book as a global example in education, thanks to its innovative practices that blend academic excellence with practical learning (Gravatá and Piza et al., 2013).

The fact that the Sustainability Institute is used as a reference in education for sustainable development (SARUA, 2014), means that one is likely to assume that everything there works in perfect order, with the tripod identified by Swilling and Annecke (2012) - soil, soul and society - in perfect balance. On closer inspection however, the SI has a number of problems, which in no way detracts from its value as an educational facility, but shows that it is not always easy to place food at the centre in the face of such a diversity of challenges.

Prior to setting the research focus, preliminary interviews were conducted in order to obtain greater clarity on the role of food at the SI, and analyse the social relations surrounding food as well as the relationship between the staff of the SI and food in the context of their personal lives.

Through these interviews there seemed to be a consensus that until recently, food never occupied the central place of interest in the SI's internal operations, even though it was a focus of its external work around land reform, farming and education. This dichotomy between what is preached and what is practiced was a major concern to many within the SI (Anderson, 2014; Klink, 2014; Tracy, 2014; Metelerkamp, 2014; Bezuindehout, 2014) as it contradicts both the values and the potential of the wider SI and Lynedoch ecovillage to function effectively as a powerful space for transformative, place-based learning for sustainable futures (Sustainability Institute, 2012).

This research aims, through the use of PAR, to bring food to the centre of discussions at the SI and in addition, to help draw up a strategy for change for the future, where the relationship between employees involved with food might be an example to complement the education offered in sustainable development.

The success of this venture could provide very useful clues for any groups of people or communities around the world who are looking for ways to bring people, community and food together.

Besides the work resulting from PAR conducted at the Sustainability Institute, Chapter 2 of this thesis contains a literature review which addresses concepts related to food education, civic agriculture (Lyson, 2004), food sovereignty (Wiebe and Desmarais et al., 2010), food security (FAO, 1996) and community building, in order to provide a broader perspective on the global food system.

## **1.6 Overview of the research design and methodology**

In order to address the research questions, a strategy was put in place. The scheme on the next pages gives an overview of this research design, and a broader explanation is brought into Chapter 3 that will guide the reader through the methods and methodologies involved.

**Question A:**

As an institution dedicated to the teaching and practice of sustainable development, what food is consumed at the Sustainability Institute, and what is the role of food?

Stakeholder interviews are going to be used to understand the flow or path of food inside the SI.

Quantitative research will be used to investigate all the food items bought at the S.I. during the period of March to May in 2013 and the same period in 2014, trying to understand any trends or difference, influenced perhaps by the invitation and/or cooking sessions.

The educational modules offered by the SI will be analysed to understand how the topic of food is addressed in the classroom.

**Question B:**

How can a simple cookbook, created and shared by the Sustainability Institute's community, promote reflection on the use and role of food at this institution?

To spend at least twenty days immersed at the SI to observe the behaviour of students, staff and others living in Lynedoch, trying to understand the relationship between them and food.

An invitation session will be hosted involving all SI staff. The main objective is to simply share a meal together and introduce them to the PAR methodology that is at the heart of this thesis.

Elos methodology will be adapted in order to create a game where the SI's staff will be invited to reflect about their food choices by cooking together and sharing meals. These are the cooking sessions

A cookbook is created to keep this story alive and recorded. The recipes presented in this book will be the recipes invented by the teams during the cooking sessions.

A digestion session will be hosted where the team will then reflect about the cooking sessions and engage to create a food system for the SI that is more aligned with its ethos.

A list of recommendations is written opening further research and action possibilities.

Through this path, the basic objectives of this research will be therefore covered.

Try to understand the current state of the SI's food system in terms of alignment with its values (i.e. education for a more sustainable world).

To explore ways of improving the SI's food system through the engagement of all its employees.

To create a list of recommendations, implementing whatever is possible during the writing of this thesis.

## 1.7 Thesis outline

Since the topic of this thesis is something fundamental to the human race, I wanted this whole work to be as easily digestible as a plate of comfort food prepared by our loved ones. As a researcher, a cook, a student and apprentice, I found it very hard to combine the language of these different roles in a single document.

This made me decide on two simultaneous paths: (1) the writing and submission of a thesis that fulfils all the academic requirements, and (2) transforming the content into a simple cookbook that will be available for free download, so that anyone with Internet access will be able to read about this journey. The cookbook will also contain pictures and illustrations, and have a unique design to help communicate emotions that can't be easily conveyed in words.

The thesis is divided into five chapters:

- Chapter 1: The first chapter focuses on my personal motivations and concerns around the topic, to help the reader understand more about my research decisions. There is also a brief introduction to the chosen research formats, as well as a perspective on the importance of this study and some clarification of terms used throughout the work.
- Chapter 2: The literature review in the second chapter provides an analysis of the context of food systems, first looking at the world, then narrowing the focus to South Africa, then Stellenbosch, and finally to the table at the Sustainability Institute. Given the broad web of relationships surrounding the Institute, I decided to use complexity theory as a framework (Cilliers, 1998). The end of this chapter provides an important reflection on food as a way to build community.
- Chapter 3: The third chapter explains the research design and methodologies I used. As it is research in which researcher and subject are inseparable, and where the action is an integral part of the work, I decided to choose methodologies and processes that would lead me to an immersion in the world I was researching, while at the same time consciously acting to change that world. Although the results initially are difficult to predict, which is common when we work on complex systems, the possibility of emergence (Cilliers, 1998) was one of the main reasons for the choice of strategy and methodologies. Also included in this chapter is a discussion of the reasons that led me to create a cookbook as a form of storytelling.
- Chapter 4: This chapter offers a summary of findings through the PAR process.

- Chapter 5: Finally, in Chapter 5 I present conclusions, recommendations and a final reflection on the learning during this journey.

## 1.8 Chapter summary

This chapter portrays a part of my history, and clearly shows the reasons for my choice of theme. It also shows the potential bias throughout this work. I intend, therefore, to inform the reader upfront about the subtext that may be contained in this research.

I did not pick the theme of food by chance. In fact, I do not believe in choices made "by chance". I do believe that each of us is guided by our personal history. Our choices are consequences of what we learned during a particular stage of our lives, and are consequences of who we are. Therefore it is difficult for me to accept that any research is without some kind of bias.

Here are three points on my personal background that may reveal potential bias:

1. As a micro farmer, farming in my backyard using 40m<sup>2</sup> of land, I do not use any kind of chemical input. I am far from being capable of feeding my family using only the harvest from this land. However, I do believe that organic agriculture changes the relationship (for the better) between farmer and farm. It helps to understand the role of the seasons, and all the lifeforms involved in agriculture, therefore amplifying the understanding of our environment and our planet.
2. Being an executive leader in a multinational company and also helping to build from scratch one of the largest groups dealing with private education in Brazil, I believe that companies will naturally have profit as a top priority. Looking at the gigantic corporations that now control most of our food, I do believe that their decisions are mostly aimed in the same direction.
3. I do believe that academic papers are not accessible, readable or even understandable by the vast majority of people, and this is the main reason why I decided to transform the content into to a more palatable form: a cookbook.



In this chapter I demonstrated my research problem, the research strategy to address this problem, the research methodologies which inspired me, and also the reasons that led me to choose two publishing formats. One of the formats is a Master's thesis that meets all academic requirements and guidelines, and the other tells this story through a simple cookbook. This is because I believe that the scientific work contained in this thesis and which involved hundreds of hours of work will be fully read by only a very small portion of the population. However, by transforming the content with the addition of photos and a more attractive design, I believe it will also appeal to people with no scientific interest or background in sustainable development, but who are simply curious.

## Chapter 2 - Literature review

### 2.1 Global food system: the challenges for today and for the future

The purpose of this section is to investigate the state of the global food system, with a critical look at the conventional large-scale system, understood here as using the techniques of the Green Revolution and high external input (HEI) agriculture, explained later in this section. It also examines different perspectives that can result in better social, economic or environmental impacts through the use of different techniques. In section 2.4 a detailed explanation is given about the food system at the Sustainability Institute to clarify the connections within the SI's network that are necessary for people to be fed.

Following section 2.6 respectively will bring some background on “sense of space” in order to provide the reader some insight about food as a vehicle for “place and community building”. This section would also be incorporated inside the cookbook (Appendix 6) in the event of a new printing session, as well as a summary of the conclusions of this work.

Staatz (2000) defines a system of food as the huge network of activities ranging from the use of inputs such as pesticides, fertilizers and compost, to the planting, harvesting, processing, distribution and sale of agricultural products by farmers as well as urban and rural consumers.

Ericksen (2008) suggests a broader definition of a food system that includes the interactions between and within biogeophysical and human environments and suggests other interactions such as power relations, gender relations, cultural histories and economic policies. These interactions then determine a set of activities from food production to consumption, and the outcomes of these activities impact food security, environmental security and social welfare.



Figure 1: Global environmental change and food security (Ericksen, 2008)

### *Problems with the global food system*

Patel (2012) suggests that our relationship with food is changing drastically. According to him, we are distancing ourselves from the origins of food, and the effects of this go far beyond the philosophical field. Increasingly, the global food system is concentrated in the hands of a few companies that dominate the whole chain from seed production and genetic modification, agricultural inputs, and food processing, right through to distribution on the shelves of supermarkets (Patel, 2012; Reardon et al., 2003; Lyson, 2004). Lichtfouse (2009) argues that conventional agriculture is almost entirely aimed at profits and business perspective. Consolidation is also taking place throughout the food system. The top ten seed companies control half of the world's supply; and only ten companies control 90% of the \$38.6 billion pesticide market - the first six control 75% of this value. If this trend continues, only three major players will control the entire market in 2015. Where processing is concerned, the ten largest companies control 26% of the \$1.3 trillion market (Patel, 2012). The area with the greatest tendency to consolidate is the retailer, where the top 100 distributors (namely, supermarkets) have 35% of the \$4 trillion market (Patel, 2012).

A very large web of interconnected people and events is needed to bring food to your plate today, and it is not too difficult to imagine the enormity of the system put into place to produce and deliver food for 7 billion people. The idyllic image of farms with horses pulling a plough, and men participating in the harvest seem to be an image of a distant past. Today, farming is a large-scale business, seen by

the size of the land used to produce food, the amount of money it moves, and the quantity of elements involved in this chain.

Yet, despite the complexity and scale of the modern food system, Patel (2012) argues that it is highly dysfunctional. Kelly (2009) suggests that agriculture kept up with the pace of population growth through significant innovation. The food produced however has not been evenly distributed (IAASTD, 2009). In 2011, 1 billion people were undernourished and at the same time, 1.5 billion were overweight (Patel, 2012). This happens while about 30% to 50% of the food produced in the world is wasted, before reaching the human stomach (Institution of Mechanical Engineers, 2013; Stuart, 2009; FAO, 2013). According to Stuart (2009) this food waste represents only the United States of America, a planted area of more than 7.5 million hectares. The amount of food wasted is just the tip of the iceberg: when a bunch of carrots is wasted, for example, all the valuable natural and human resources that were needed to produce the carrots are also wasted. In other words, the greater the inputs required to produce, process, transport and prepare an item of food, the greater the impact when it is wasted.

Yet we often hear about the need to produce more food in order to reduce the cost of farming, and reach a larger portion of the population with sufficient nutrition. Statements like these are frequently present in the reports of corporations openly pursuing market consolidation, such as Monsanto (Monsanto, 2014) and Syngenta (Syngenta, 2015). Bakan (2004) argues that most corporations will aim at profit as the first priority, and attempt to externalize social and environmental costs whenever possible. This thinking has led to dramatic changes in agriculture. The revolution began in the fields mainly between the years 1950 and 1970, and coordinated primarily by the US government, turned that country into a powerful “agricultural nation” via what was called the Green Revolution (GR). In essence, this revolution was a package containing hybrid seeds, which was sold to farmers, replacing a long tradition of seed banks, and seed exchange among producers (Swilling & Annecke, 2012; Kelly, 2009). The package included chemical inputs derived mainly from oil (but also in the form of rock phosphate) for fertilizers, and pesticides produced and distributed globally by huge multinational companies. In addition, large-scale irrigation systems were often installed and anchored by the World Bank, as well as micro credit companies (Swilling & Annecke, 2012). Another name for this type of farming is HEI - high external input agriculture.

Borlaug (2000) argues that we need the genetic modification of seeds in order to make them more productive, and says that anyone against this kind of science is a threat to humanity. Evenson (2003) produced a very broad article analysing the impacts of the Green Revolution during 1960 to 2000, and concluded that the benefits to customers were linked to a lower price for food. Rockström (2015) confirms the benefits of the Green Revolution and large-scale agriculture to feed humanity, but argues that due to the very high environmental cost, agriculture in the future must be ecologically sustainable and take into account human health.

Richards (2010) analyses the “new” Green Revolution which has been unfolding in South America, in particular the introduction of GMO soya seeds since 1996 and their accompanying package of external inputs. He argues that in that region of the planet these new input packages are not solving any environmental problems or addressing humanity’s hunger.

On the other hand, (Sharp and Leshner, 2016) argue that due to the climate change in the USA, science has an increasingly important role to play in securing future production: “History has shown that science can solve the nation’s agriculture and food production problems, but to do so, the American system of food and agricultural research must be substantially reinvigorated” (Sharp and Leshner, 2016).

The debate around the need of the use of technology such as GMO seeds, chemical pesticides and chemical fertilizers in order to feed the growing population is far from reaching consensus.

In 2009, the report – Eating the Planet: Feeding and fuelling the world sustainably, fairly and humanely – by Erb et al. (2009) included different scenarios for the human diet in order to come to conclusions about the possibility or not for organic farming to feed the world.

These scenarios were (Erb et al., 2009):

- The ‘western high meat’: assuming fast acceleration of both economic and consumption patterns in the coming decades leading to the globalization of the so called ‘western diet pattern’ i.e. protein consumption in all regions

are at/or above 80 grams / person x day and diets reach 3,000 kcal / person x day.

- The 'current trend': scenario maintains current growth trends and we have strong differences in the composition and diet levels. All regions reach diets above 2,700 kcal / person x day. Protein consumption attain 70 grams / person x day.
- The 'less meat scenario': diet levels attain same level as the 'current trend' scenario but with 30% of the protein coming from animal products. Protein levels are nutritionally sufficient but the protein consumption in North America and Western Europe decreases. Consumption of cereals, fruits, roots, vegetables rise above 1700 kcal / day x person while the animal products decrease.
- The 'fair less meat' scenario reduces the protein from animal source to 20%, a universal diet of 2,800 kcal / day x person is imposed. Protein consumption is close to 75 g / person x day.

They conclude (Erb et al., 2009) by saying that to feed 9,2 billion people (the scenario of 2050) with calories, protein and fat using only organic farming and livestock systems is found to be 'probably feasible' under the conditions of: increasing the global cropland area of approximately 20% and if people can adopt a diet with no more than 20% of protein from animal sources at a level of 2,800 calories per person per day (the 'fair less meat' scenario).

UNEP (2010) report - Assessing the Environmental Impacts of Consumption and Production Priority Products and Materials - concludes that a shift towards a fair less meat diet is necessary to face climate change, fuel and food security.

On the other hand, Nelson (2001), in *Genetically Modified Organisms In Agriculture* bring together a series of articles from many different authors that would argue that GMOs and HEI techniques are absolutely necessary in order to achieve Food Security and can in some ways contribute towards saving the planet's ecosystems.

Among these articles, Dennis Avery (Nelson, 2001) opposes the eco-centric view of most activists (or eco-opposition as he calls) that would argue that:

- Monocultures are more vulnerable to pest epidemics
- High-yield seeds do displace old landrace varieties and reduce biodiversity
- Animal antibiotics would weaken our ability to treat human disease and,
- Confinement feeding dumps heavy loads of animal waste into rivers

To which Avery (Nelson, 2001) would respond that: monocultures produce far more food per acre and new systems of pest control are dealing with pests; the use of high-yield seeds actually save room for nature with higher yields; we are getting resistance to antibiotics mostly because people quit the treatment before it ends leaving the toughest bacteria to reproduce and finally, confinement saves perhaps 3 million square miles (approximately 7,8 million square km) of land for wildlife.

Avery (1997) argues that without the yield increases and confinement feeding, another 20 million square miles would have been taken from nature which is more than the total remaining area occupied by forests on the planet (16 million square miles).

Morris (2011) argues that an analysis (aiming for policy making) of GMO's has to be done considering risks and also benefits and suggest methodologies that would help policy makers to take better decisions.

Reganold and Wachter (2016), authors of a very recent article named *Organic Agriculture In The 21<sup>st</sup> Century*, would argue that after analyzing a big body of literature, that organic farming produces lower yields when compared to conventional farming (i.e. HEI) but at the same time it is more profitable for farmers and the higher price can also help compensate farmers for providing ecosystem services such as increasing the water-holding capacity of the soil (which is a valuable service in a future where severe drought conditions are expected to increase) and also improving biodiversity.

The Massachusetts Institute of Technology (MIT, 2015) recently launched a report about the technology involved in the food chain in order to face the challenges of today and in the future. This report points out the massive investment (venture capital) of US\$ 1 Billion in 2014 (compared to US\$ 288 Million in 2013) is focusing in innovation in the food chain. To feed the world's growing population, organic farming and also innovative methods will be needed (Reganold and Wachter, 2016).

Another initiative from MIT is the Open Agriculture online platform (<http://openag.media.mit.edu/about/>) that aims to share knowledge about innovative methods of farming (most of them involving high end technology) in an effort to "create 1 Billion more farmers on the planet".

Although there is no doubt about the enormous success of GR techniques to increase yields and produce enough food to keep up with the population growth (Kelly, 2009), HEI agriculture apparently has a darker side, often overlooked. The purchase of Green Revolution inputs most often requires small and especially micro farmers to take bank loans. The seeds, genetically modified, are sterile and must be bought again for the next crop. If the crop does not produce the desired results, the loan still has to be repaid, leaving the farmer with few exits apart from taking another loan in order to try again. Unfortunately, in many cases, the story ends badly. Although for some small and micro farmers the use of GR might lift them from poverty, on the other side, pressured by bank debt, many farmers in India have committed suicide (Shiva, 2000; Kelly, 2009).

Suicide of farmers is an example of the seriousness of the impact of this type of agriculture and the welfare of human beings. Another perspective looks at the damage brought about by this type of agriculture to the diverse ecosystems that are responsible for maintaining the conditions that supply life. In 2005, an important scientific document commissioned five years before by the UN Secretary General, Kofi Annan, surfaced. It was the Millennium Ecosystem Assessment (MEA), a report that for the first time illustrated the relationship between human well-being and ecosystem health at a global level. Although it is the result of the collaboration of 1360 experts from 95 countries, the report is practically unknown outside of environmental sciences field (Swilling & Annecke, 2012). According to the MEA (United Nations, 2005), the current food system uses 70% of all



freshwater available, plus 25% of all land area available for cultivation. This would not be a problem if our current food system operated in a way that sustainably exploited land resources. Unfortunately, this does not seem to be the case.

According to the MEA, HEI agriculture is responsible for the pollution of our natural sources of water, the loss of our ecosystems and biodiversity, in addition to being responsible for at least 30% of greenhouse gas emissions (GHGs) (United Nations, 2005). The introduction of genetically modified organisms (GMOs) has contributed to great devastation of biodiversity (IAASTD, 2008; Barker, 2006).

Another critical document, the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), initiated in 2002 by the World Bank and the Food and Agriculture Organization of the United Nations (FAO). The objective of this report (IAASTD, 2008) was to assess the impacts of past, present and future agricultural knowledge, science and technology on: the reduction of poverty and hunger, improvement of rural livelihoods and human health, and equitable, socially, environmentally and economically sustainable development. One of the important findings of this document is that both transgenic and conventional breeding will be needed to boost crop productivity during the next 50 years, otherwise “humanity would likely be more vulnerable to climatic and other shocks and to increased natural resource scarcity”, (IAASTD, 2008), converging to the views pointed out in previous paragraphs (Reganold and Wachter, 2016).

The most basic purpose of food is to provide energy to be utilised by a living creature to perform its many vital functions. When we think about the volume of inputs added to food before it is consumed, we should also reflect on the energy required to produce the food, and on the other side, the energy we extract from it to nurture our bodies. A strange imbalance can be seen, however. On one side of the scale is all the energy used across the entire chain: from the inputs in the form of fertilizers and pesticides (the vast majority of which are derived from petroleum), to transportation and logistics in many different steps, to processing, and finally going to the kitchens where more inputs (gas, electricity, etc) are used to prepare food. On the other side of the scale, we take in the calories derived from food in its final state when we consume them. This equation shows that in the United States of America, the input energy for food for humans is almost 10 times higher than the power supply withdrawal from it by those who consume it (Ackerman-Leist,

2013), raising the question and adding to the debate on “chemical” (i.e. HEI) vs. “organic” farming.

The whole food supply chain and its heavy energy requirements should cause us to reflect on the real value of agricultural commodities that no longer are about lands or farmers. According to Lyson (2004) corporations have captured the real value of agriculture across the food system. On one side they are pushing farmers to use expensive inputs and on the other they precisely manage production, quality and sales prices (Lyson, 2004). Patel (2012) summarises in one sentence, his perspective about the current state of the global food system: "Unless you're a corporate food executive, the food system is not working for you."

As one can read, the debate around HEI techniques and organic food is not an easy one. The Green Revolution brought a massive scale to agriculture and made food accessible to billions of people on the planet (Evenson, 2003; Kelly, 2009), the environmental cost however may prove that this was not the best model for the long run (Rockström, 2015). The current level of wastage of food (Stuart, 2009; FAO 2013; Institution of Mechanical Engineers, 2013) around 30% to 50% adds fuel to a discussion on the need of more production.

Erb et al., (2009) argues that to feed the world, only through an organic approach to agriculture, the average human diet would have to change to one with far less meat, at the same time, UNEP (2012) points a diet with far less meat in order to fight climate change. Badgley and Perfecto (2007) point that organic agriculture per se, cannot solve all the contradictions from HEI Agriculture but the potential that it could feed the world, opens an interesting debate about innovation in agriculture towards a new way of producing food.

A perspective that seems to be out of the discussion however is the relationship between people, food and place or, as Feagan (2007) says: “to map the local in local food systems”. Section 2.6 will add some background about the “sense of place”.

#### *Placing the global food system in context: the polycrisis*

Although the debate around HEI Agriculture seems far to be over and at the same

time there's no consensus about "only organic" food being able to feed the planet (Reganold and Wachter, 2016; Erb et al., 2009; Nelson, 2001), it is important to explore the connections between agriculture and the polycrisis.

The crisis in the food system is not an isolated crisis, nor is it a crisis without consequences. Swilling and Annecke (2012) describe a series of crises that we already live in, and borrow the word "polycrisis" from French philosopher Edgar Morin (1999) to describe the multiple challenges.

A summary of this polycrisis is necessary to put food system issues in context. Landman (2011) used the polycrisis as a framework to include the global food system as a crucial factor when we look into our future.

The MEA report of the United Nations (UN), compiled by 1360 scientists from 95 countries, released in 2005 confirms the fact that 60% of the ecosystems on which humanity depends for survival, are to some extent degraded. Furthermore, the increase of the human population implies a higher consumption of food. Food production increased by 250% between 1960 and 1990 to meet our growing appetite and will have to grow another 100% to feed the extra 2 Billion people that will inhabit this planet in 2050 (Foley, 2014). A direct consequence of this is that the consumption of water, land and other inputs extracted from the planet have also increased (United Nations, 2005). The term 'ecosystem services' in the MEA report can be divided into four categories (Swilling & Annecke, 2012) on which our socio-economic systems depend. There are provisioning systems, such as food, e.g. livestock, fisheries, crops, and wild foods; fibers such as cotton, hemp, and silk; genetic resources; biochemicals, natural medicine, pharmaceutical, and water. There are regulatory systems that control air quality, erosion, water purification and sewage, disease, pests, pollination and natural hazards. There are cultural services that enhance the quality of human life through religious experience, aesthetics, recreation and ecotourism. Finally, there are support services such as nutrient cycling, soil formation and primary production. All these categories are intertwined; the production of food, for instance, involves soil, pollination, and water.

The devastating effect of our current systems of food production on the biodiversity of our planet appears in the report "Food wastage footprint - Impacts on natural resources". The report points to hundreds of species of amphibians,

mammals and birds that appear on several red lists and are directly threatened by our agriculture and animal breeding (FAO, 2013).

The increase in average temperature from global warming leads to impacts in several areas, from the increase in mean sea level, threatening coastal populations, to a series of climatological phenomena such as increasing and decreasing rainfall in many areas, which will certainly affect our food production. An average temperature increase of 1°C relative to the pre-industrial era will negatively impact (median yield per decade) up to 2% of our major crops (wheat, rice and maize) probably from 2030 to the rest of the century, and from 2050 those impacts are likely to become more severe. Besides the direct impact on the harvest, changes in average temperature and rainfall contribute to a general increase in prices estimated between 3 - 84% (IPCC, 2014).

When we talk about oil peak, the term can often be misunderstood to mean that oil is running out. The oil supply is not ending, but the extraction of this material is becoming increasingly difficult and risky. Brazil, for example, recently discovered on its shores a huge reserve of submerged petroleum. The extraction of this resource however, will cost 50% more than conventional extraction due to the complexity of factors involved, such as the environment, atmospheric pressure, and new technologies to be employed (Lima, 2008). What peak oil means therefore is the end of "cheap" oil (International Energy Agency, 2008). Our food system, heavily based on HEI techniques, is largely dependent on oil and vulnerable to its price fluctuations, and the link between oil scarcity and risks for food security are clear (Wakeford & Swilling, 2014). Mare (2015) reports that since June 2014, however, oil prices have dropped sharply. The increasing of the use of fracking (i.e. the method of obtaining gas and oil by injecting liquid into the earth's surface) might be one of the reasons for this drop (Mare, 2015).

In 2008 the International Assessment of Agricultural Knowledge, Science and Technology for Development (2008) published a report confirming that 23% of all land used is degraded in some way. The emphasis on increasing productivity is responsible for significant levels of land degradation that affects 1.9 billion hectares and 2.6 billion people. Fifty years ago, the withdrawal of fresh water from rivers was one third of what it is today, and about 70% of fresh water globally withdrawn is for irrigation, which in some cases leads to another problem - salinisation. Agriculture also contributes to about 60% of all anthropogenic

emissions of CH<sub>4</sub> (methane) and 50% of N<sub>2</sub>O (IAASTD, 2008).

Swilling and Annecke (2012) argue that there is a link between the degradation of soils and rising food prices and unless there is a way to reverse soil degradation, global food security will be unattainable and the subject (i.e. soil degradation) is not given sufficient attention.

Soil is the very base of the industry of agriculture and, despite the development of new and improved varieties (GMOs), in some regions of the planet like Sub Saharian Africa, yields are declining and there is evidence that this is happening due to soil degradation (Ghrun, Goletti and Yudelman, 2000).

#### *Defining a new global food system*

To work, the world's economy depends on the processing of materials that are extracted from the planet to then be able to meet human needs. After their use, many of these materials simply become waste (Botsman & Rogers, 2011). Looking at nature, however, there's no such thing as waste since one species' waste is other species' food, and this closed loop (McDonough and Braungart, 2002) is an important characteristic of permaculture, which is a useful perspective through which to look at the food system (Birnbaum & Fox, 2014).

Johan Rockström is the lead author of a concept that explores the main boundaries that we should not cross in order for humanity to be able to operate in a safe space (Rockström et al., 2013). The authors identify nine so-called "planetary boundaries": climate change, biodiversity loss, biogeochemistry, ocean acidification, land use, fresh water, ozone depletion, atmospheric aerosols and chemical pollution (Rockström et al., 2013). Each one of these boundaries is measured by control variables that add a numerical limit to that boundary, and Rockström (2013) suggests that humanity has already crossed four of the nine boundaries.

More recently, building on his work around planetary boundaries, Rockström said during a conference that was aimed to integrate health, food and environment to address the diet of a growing population, that *"If we get it right on food, we get it*

*right for both people and planet*" (Rockström, 2015). According to him, in the very near future, we must find ways to feed humanity that are better for the environment and for people's health.

In order for our food system to be able to face the polycrisis, Landman (2011) points out some possible solutions or adaptation needs: the food systems must redistribute resources to equally meet the needs of a global population and then be reconfigured to empower the poorest producers; in our urban future, food systems must adapt to meet an increasingly urban population and especially the poorest social strata living in urban slums; it must repair the damage caused to the environment and also be able to preserve the ecosystems for the future; in a scenario where climate change is evident, the food system must reduce GHG emissions and also adapt to climate changes to come; it must become more energy efficient and independent of oil; it should increase the production of food but operate within the confines of terrestrial ecosystems; and ultimately, our food systems should secure sources of food for all, either by means of self-sufficiency through food production, or market access and sufficient resources to buy food.

## **2.2 Food systems in South Africa**

Sub-Saharan Africa has not escaped the global context described at the beginning of this chapter. In this region of the world, the expansion of land for agricultural purposes causes the loss of forests and other habitat destruction (Paarlberg, 2010). This abuse of the Earth, combined with the pressure of agricultural activity, ultimately impoverishes the soil and reduces production (Paarlberg, 2010). The results in terms of nutrition are obvious. The number of Africans who are living in a situation of food insecurity - consuming less than 2,100 calories per day - increased from 300 million in 1992 to 450 million in 2007. One in three Africans now suffer from chronic malnutrition and this number could still increase by another 30% in 2020, affecting approximately 645 million people (Paarlberg, 2010). In South Africa, food insecurity reaches 14% to 52% of the households depending on the metrics used (Joubert & Miller, 2012; Metelerkamp, 2014). Malnutrition is responsible for 24% of children's stunting problems (low body height in relation to age) (Metelerkamp, 2014).

Nor is the African continent exempt from the Green Revolution and HEI agriculture. There is a growing influence by the Alliance for a Green Revolution in Africa (AGRA), which promotes the package of "innovation", extending the use of

chemical fertilizers and genetically modified seeds (GMO) on this continent (Juma, 2011).

Besides the huge change in the land, the food system in Africa has also changed, following the global trend. In 2003, South Africa specifically appeared in front of the race for consolidation and concentration of the giant retail market, with somewhere around a 55% share, with a ratio of approximately 1700 supermarkets to 35 million people. South African chains have expanded into 13 other countries on the continent as well as India, Australia and the Philippines (Reardon & Timmer et al., 2003). Confirming this trend of consolidation, Ntloedibe (2010) suggests that 96.5% of all food retail space is held by just three retail giants in South Africa.

Adding to the complex scenario where HEI agriculture is put against organic agriculture, as described in section 2.1, economic forces also push farmers to adopt the Green Revolution technologies putting aside the more 'ecological perspective' (Malherbe and Marais, 2015).

The town of Stellenbosch, where the SI is located, has in theory the potential to produce all the food needed to meet local demand, either through the current or even optimal nutritional intake (Schulschenk, 2010). The production of some items such as sugar cane, rice and some roots is limited by other factors, but current production however is oriented to the export market, especially in the case of grapes and deciduous fruits (Schulschenk, 2010). Approximately 60% of what is produced in the region leaves the country. The remains of the produce is concentrated in distribution centers that will eventually sell these products to major retailers (Schulschenk, 2010).

### **2.3 Food systems at Lynedoch Ecovillage and the Sustainability Institute**

The small village of Lynedoch is situated about 9km from the town of Stellenbosch in the Western Cape province in South Africa. The village is home to dozens of homes of various styles, from the simplest to the most daring. To build there, one must have a plan of the premises showing how the owners would minimise the environmental impact of construction and operation of the house. The village is the first intentional community of this kind in the country, and is built on three pillars: to be a mixed community in terms of race and social class, organised around a children's learning environment; to strive to be a practical example of an urban

system designed in order to live ecologically; and financially independent so there's no need for external funding to sustain itself over time (Swilling & Annecke, 2012). Today, over 10 years after its foundation, Lynedoch has 24 homes with plans for expand to 30, a kindergarten, a primary school and the Sustainability Institute (Annecke, 2012).

The Sustainability Institute is the educational center of the ecovillage, and accommodates in its structure a primary and pre-primary school with 450 students, primarily intended for the children of farmworkers from surrounding farms. The Sustainability Institute, founded in 1999, promotes learning for sustainable living by combining theory and practice, and gives special reference to poverty eradication (Sustainability Institute, 2012). The institute provides courses and other events, and places particular emphasis on the academic programmes of Masters in Sustainable Development (which comprises a graduate diploma and MPhil in Sustainable Development, in partnership with the School of Public Leadership at Stellenbosch University) and a Doctorate in Transdisciplinary Studies (in partnership with the TsamaHub, also at the University of Stellenbosch) (Sustainability Institute, 2012).

Described by one researcher as a mini South Africa (Ringelberg, 2013), the context of Lynedoch is absolutely unique, for there, various social strata coexist. This is due to a process that began with the sale of plots to members of a poorer population, mainly from the "coloured" community, many of whom achieved in Lynedoch the biggest dream of their lives - having a home. The academic heart of the village, the SI has remarkable influence on its surroundings (Ringelberg, 2013) and is the academic vibrant centre of the village. "The SI in the Lynedoch EcoVillage, with mindful attention to an unfolding web of processes, is a place where potentialities for transformation are created through the intricate weaving together of equity, ecology and innovation" (Annecke, 2012). During a typical day of activities, including activities at the SI, the Lynedoch ecovillage can accommodate around 350 people (Haysom, Vecchione Gonçalves and Thorn, 2010).

There seems to be no literature that considers the very specific food system of the Sustainability Institute itself, and literature that deeply investigates the food system in Lynedoch Ecovillage is scarce. Most of the literature found is connected to different systems from within the village, such as water and sanitation (Dowling,



2007) or energy storage (Lubbe, 2010). Most of the literature produced about Lynedoch is available at the Sustainability website and can be free downloaded from <http://www.sustainabilityinstitute.net/newsdocs/document-downloads>.

One of the main pieces of literature that really focus on Lynedoch and investigates its food system comes from Gareth Haysom, Marcela Vecchione Gonçalves and Nadia Thorn (2010). They conclude, after a round of interviews with 19 residents, that within the ecovillage, the eating habits suggest that 70% of purchases are made in supermarkets, while 20% of purchases are made from local farmers and the remaining 10% are split between street vendors and local shops. 93% of people involved in the research undertaken said they prefer to buy products local to the Western Cape as opposed to imported products. The types of food purchased point to a more balanced diet than that found in poor communities in Cape Town (Haysom, Vecchione Gonçalves & Thorn, 2010).

Besides Lynedoch, other ecovillages however are known by the fact that food plays a very central role in the community. Not only food, but the methods used to produce food and the care of the soil, which are part of a design method called permaculture. This method takes into consideration three main ethical maxims: care for the Earth (soil, forests and water), care for people (self, kin and community), and sharing fairly (limits to consumption and reproduction, and redistribution of surplus) (Holmgren, 2015). From Tanzania (Badilisha Ecovillage), through to Indonesia (Green School), USA (Ithaca), Iceland (Sólheimar Ecovillage), Brazil (Yorenka ãtame Center) and other countries, it is possible to find communities that organise themselves around the principles of permaculture (Birnbaum & Fox, 2014).

In the United Kingdom, the Schumacher College, a centre for nature-based education, is an example where food plays an important role among students. (Schumacher College, 2014). Founder Satish Kumar proposes a new trinity: soil, soul and society (Kumar, 2013). Soil represents the entire natural world, without soil there's no food and without food there's no life (Kumar, 2013). The gardens at Schumacher College produce vegetables based on organic principles, and sometimes are the first contact with soil that some students have (Schumacher College, 2014). Volunteer work connects people and soil, and the results can be seen when former Schumacher students or volunteers talk about food at Schumacher College with great passion (Curi, 2014).

The localization and involvement of a community into food production helps to bring a sense of space or embeddedness (Hinrichs, 2000). Heinberg and Bomford (2009) would argue that we need a transition in the agriculture and this new food system will require more farmers that are more diverse, smaller, producing less package food and avoiding long distance travels by localizing the production.

## 2.4 Complex systems

H.G.J. van Mil et al (2014) argue that the global challenges of our food system and agriculture should be addressed through a complex systems approach. The food system is composed of many different components in dynamic interaction with other systems that keep changing through these interactions. The components themselves are also composed of many other systems (van Mil et al., 2014). Tompkins and Bird (1998) describe the interconnections within a huge web of relationships between different microorganisms that participate in the production of one of the most vital elements for the production of food – soil.

It is important to describe at this point some features of complex systems that will be used as a theoretical framework throughout this work. According to Cilliers (1998):

- *Complex systems consist of a large number of elements.* The SI staff, their suppliers of food, and all responsibilities for the webbed path of food from the earth to the table at the Sustainability Institute, certainly make up a larger number of elements.
- *The elements that make up the complex system interact dynamically.* The relationships between the various employees within the SI, beyond their interactions with the food system that somehow feeds them, are certainly dynamic.
- *The level of interaction is high.* Through our use of PAR and the method chosen to promote reflection (the cookbook), relations between participants have certainly been enriched.
- *Interactions are nonlinear.* The entire chain of relationships between the various officials of the SI and its suppliers and producers, to the extent that these are not fixed, cannot be described as linear.
- *Complex systems are open systems.* The SI food system interacts with the social context and the ecosystem that surrounds it.
- *Complex systems operate under conditions far from equilibrium.*

Relationships that are constantly changing and sometimes even conflicting, as we have seen through some specific interviews (Anderson, 2014), also characterise the SI's food system.

- *Complex systems have a history.* As obvious as this seems, the current context of the food system of the SI is the result of a long history from its beginning until today.
- *Individuals are ignorant of the behavior of the whole in which they live.*
- *The interactions happen in a "closed sphere".* The first elements interact in relation to their immediate surroundings.
- *There are loops and interconnections.* At each event - the collective kitchen sessions - the various people who participated develop the theme in many informal conversations.

From a similar perspective, van Mil et al. (2014) offer a few characteristics of a complex system:

- These systems are part of the systems in our world that are continuously changing, self-organising, adaptive and interdependent.
- The response of a combination of factors cannot be inferred when the response of an isolated individual is analysed.
- The relevant factors that determine the behaviour of the system are in a continuous state of flux.
- A reductionist analysis is incomplete.
- Ways to intervene for changing the system should probably articulate strategies towards the desired change rather than trying to formulate the best intervention.

## **2.5 Community building: food at the centre**

The objective of this section is to bring insights and reflections on the role of food in our lives and also as a vehicle for strengthening or forming a community. Besides concepts, we will also explore some practical cases from South Africa.

The human adventure on this planet is relatively recent compared to the emergence of life on Earth, something that supposedly happened about 3.5 billion years ago (Lovelock, 2007). Reflecting on our earliest ancestors, images of humans sitting around a campfire in ancient times may come to our minds. Something we have in common with them is the fact that we also eat or at least try

to eat on a daily basis.

Since prehistoric times, food has always been something that brought man closer to his neighbour, to hunt together, gather fruit, or simply share a meal. Since our most distant ancestors, who lived by hunting and gathering, food has always played a fundamental role in our community life, be it in small groups and tribes of hunters and gatherers (Kelly, 2013) or in large cities where we often invite friends or relatives to share a meal.

What has changed significantly is the way we relate to food and its origin. In ancient tribes, all men, women, children, and the elderly were somehow involved in the preparation or sharing of a meal, almost always having contact with the raw ingredients or with the meat of freshly slaughtered animals (Kelly, 2013). Today, thousands of years later, our society seems to seek first and foremost the practicality of a meal, the speed of which it is ready for consumption, following a "ready to go" lifestyle (Tam, 2008). The pleasure of preparing a meal together has become something unusual and separate from our day-to-day activities. Far from this romantic perspective, however, it is important to reflect on the fact that to hunt for food or to grow your own food might not be the simplest or safest of tasks in today's world. Supermarkets do have their value: they have made food accessible to billions of people around the globe (Patel, 2012).

### *The Slow Food movement*

According to the slow food movement (Slow Food International, 2015) the need for a return to this "fellowship around food" eventually inspired an Italian in the 1980s to start a movement that above all wanted to reconnect people and the pleasures of the table, recognising that food is an integral part and great influence on the greater context surrounding the plate - planet, people, politics and culture. In response to the fast food still emerging in that decade, arose one of the largest movements for conviviality around the table: the slow food movement (Slow Food International, 2015).

The slow food movement is just one example of several movements throughout the world where food is the focus, and we're not talking here about elitist events and dinners washed down with French Champagne. In schools, activities that have food as a centre end up promoting better community integration, involving students, teachers and sometimes even family. Discussions about local food are a

growing topic for coffee shops and school cafeterias, and also for large corporations (Richardson, 2011). In Los Angeles alone, in the state of California in the USA, the school district has more than 500 gardens, and there are more than 2,000 gardens in total in the state. Teachers and administrators are using these gardens in multiethnic schools as vehicles for partnerships between the school and the surrounding community, in addition to achieving an improvement in academic performance (Richardson, 2011). Also from California comes another example of an organisation that is dedicated to connecting children and food, and develops curriculums to teach different subjects such as history, chemistry, etc, all based on living examples of food and cooking experiences (Edible Schoolyard, 2015).

#### *The rise of food sovereignty and civic agriculture*

Far from being a trivial or superficial subject, eating is a human act, and the scale of the challenge to feed 7 billion people is undoubtedly huge. When researching food systems, one inevitably encounters commentary on the need for access to food, which sometimes also incorporates cultural and political issues. The term 'food security' is an important starting point. In 1996 the World Food Summit defined the term as the state in which "all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet dietary needs and food preference for an active and healthy life" (FAO, 1996). The term 'food sovereignty' was established to express the political and economic dimension inherent in the debate on food and agriculture. The definition of food sovereignty broadly covers the laws of nations that allow people to control their own food systems, including their own markets, modes of production, culture and the environment related to food. This setting is an alternative to the neoliberal model for agriculture and commerce (Wiebe & Desmarais et al., 2010).

During the 1990s, a major expansion of biotechnology companies who commonly used the term 'new agriculture' to name the revolution caused mainly by HEI agriculture and GMO seeds, was accompanied by a parallel movement of small producers and food processors in the USA, who organised themselves into locally based networks. To this movement Thomas A. Lyson (2004) gave the name "civic agriculture". This term is not a replacement for food security or food sovereignty but a complement to them, bringing a new ingredient: the citizen. This made local, organic, small-scale agriculture a community activity. Although perhaps still

growing in various parts of the world, but certainly present in hundreds of cities, there is a common movement of people connecting to each other around food, and "the new social blueprint for agriculture will come from below, not above" (Lyson, 2004).

Next, I will explore three examples of what I consider civic agriculture close to the SI near Stellenbosch. One of them is an urban farm in the upmarket neighbourhood of Oranjezicht, Cape Town, about 32 km from the SI. The other two projects involve less advantaged social groups, from small farmers to food producers in the slums, townships and informal settlements (as they are called) in South Africa.

These three examples were chosen in an attempt to explore different social layers, including upper-middle income earners in Oranjezicht, and lower-income small farmers connected to the Green Road project and Abalimi Bezekhaya as explained in the following paragraphs.

These diverse projects and people aim to explore how food can be a powerful tool to connect people and communities. Patel (2012) suggests that spending money in local food markets helps to build community since the money tends to get "recycled" within the community.

#### *Oranjezicht City Farm*

"Urban agriculture can inspire people to make changes in their lives, improve their health and wellbeing, and adopt sustainable lifestyles. It's more than growing veggies. We want to educate people, build communities, and rethink how food markets operate" (Joubert, 2014).

The Oranjezicht City Farm is part of a working farm originally called 'Oranje Zigt' that was established in 1709, and became the largest farm in Upper Table Valley in the nineteenth century. Engulfed by urban expansion, the site fell into disuse until recent decades (Oranjezicht City Farm, 2014). However, through the effort of the local community, the abandoned plot became a point of convergence with food at its centre. The Oranjezicht City Farm (OZCF) is a non-profit project that celebrates local food, culture and community through collective farming in Cape Town. Located near the corner of Upper Orange and Sidmouth Avenue, the

project offers a series of activities (Oranjezicht City Farm, 2014; Joubert, 2014) including guided tours to schools where children have the chance to learn through specific programmes about movements like the "farm-to-table" movement, and to see the on-site cultivation of various edible species. Also, on Saturdays the farm becomes a large outdoor market where anyone can visit and buy food produced on the farm. At the market there are also other stands whose rental brings extra income to the project.

The vision for OZCF (Oranjezicht City Farm, 2014) is to improve under-utilised public green spaces by creating demonstration gardens for hands-on, community-wide, food gardening education, thereby increasing access to fresh vegetables.

The main objectives are:

- To serve as an educational resource for small-scale organic food production for City Bowl residents
- Increase access to nutritious fresh vegetables for the community
- Increase the number of organic gardeners in the City Bowl, leading to more outdoor activities and healthier lifestyles
- Build capacity and skills of youth and adults seeking work in urban food production Promote connections and foster relationships between and among individuals, garden communities, NGOs
- Improve unused or under-utilised public green space in the City Bowl, preserving and protecting undeveloped land

Recently, the founders of the Oranjezicht City Farm started a lecture series in Cape Town, the central theme of which is food. Entitled 'Food Dialogues' (Oranjezicht City Farm, 2014), lectures were given every Monday for almost three months at a location in the city center. The meetings brought together panelists on different food-related themes, ranging from urban gardens, urban bee keeping, and ethics of animal waste treatment, to a growing and interested audience. I had the chance to attend at least 4 of the 10 meetings offered, and on the first day, organisers were surprised by the large number of people arriving. More and more chairs had to be brought in to accommodate the crowd, which reached 45 people. This is an example of how an initiative like this creates and makes use of a network of people, and where impacts can often go further than planned.

### *Green Road Project*

With its first centre located inside a Waldorf school in Stellenbosch, the Green Road Project intends to reduce the size of supply chains between producer and consumer, while creating work opportunities for the less affluent population. Furthermore, food production is entirely organic - completely opposite to HEI agriculture. In the words of the project creators: "Walk the Green Road: enjoy fresh seasonal organic produce, participate in a short supply chain, develop a new alliance between farmer and consumer, create an economy that supports sustainable development" (Green Road, 2014).

The project was born with a vision anchored in three interconnected goals (Green Road, 2014):

- The first goal is to shorten the traditional supply chain of food production in order to minimise food waste, allow more direct benefit to farmers by giving them a larger share of the income from their produce, and in addition offer a cost benefit to consumers.
- The second goal is to encourage authentic, sustainable organic and responsible farming with all the benefits that it brings, from improved product quality and healthier foods for consumers to better soil management, crop yield and life quality for farmers.
- Lastly, Green Road aims to empower people through employment opportunities created in the local community pockets and to share the success of the model on a community level.

This short supply chain begins with five emerging farmers who produce food for about 160 families, who buy these products through a system of bags that can be composed in different ways to meet their demands (Green Road, 2014).

### *Abalimi Bezekhaya*

My final example is from a region called the Cape Flats where two large slums and townships can be found: Nyanga and Khayelithsa. Abalimi Bezekhaya ("Farmers of the Home" in the isiXhosa language) is an NGO whose main focus is to help fight poverty in the area by growing food organically in community gardens, community and municipal land plots and in residents' own backyards. As a second focus, the NGO encourages the planting of indigenous flora in schools and streets



in the area to transform the dunes of the humid region (Abalimi Bezekhaya, 2014).

Abalimi Bezekhaya offers residents of the region a number of support services such as: project implementation, obtaining the horticultural and agricultural commodities, training, construction planning, facilitating partnerships, research, monitoring and evaluation. For the purposes of this study, we will focus on one of the result areas of Abalimi called “Harvest of Hope” (Harvest of Hope, 2014; Joubert, 2014). With the help of the organisation, hundreds of micro farmers scattered throughout the Cape Flats now grow vegetables in their own backyards, whether for their own families’ consumption, to donate to a neighbour in need, or to sell the surplus within their communities. Access to shops and markets where their surplus produce could be sold is not easy for the local people. However, the Harvest of Hope project assists in creating a small outlet which organises the surplus production to be sold in different boxes, similar to the project Green Road scheme (Harvest of Hope, 2014). To be able to sell their products in this way, the micro farmers have to achieve great standards of purely organic produce (Harvest of Hope, 2014).

Through this project, which began in 2008, about 80 boxes were distributed weekly to consumers who saw it as an opportunity to buy organic vegetables almost direct from the producer and also help improve the lives of people living in the Cape Flats. In 2010, two years after the launch, the number of boxes tripled, with over 250 different pure organic products grown by the inhabitants of the townships in the Cape Flats and delivered to hundreds of families in Cape Town. Each box can feed an average family for about a week and its cost is ZAR 121.00 (Harvest of Hope, 2014). The Abalimi Bezekhaya project through Harvests of Hope is a good example of community-supported agriculture (CSA), where the union of actors creates resilience among a community.

## **2.6 Sense of place**

We are at the very end of summer now and our tomatoes in the backyard are red and ready to be harvested. My young daughter and I planted these tomatoes more than 60 days ago. We were happy when the sprouts pointed out the first leaves out of the soil. We followed their growth very closely. The flowers came quickly and we saw bees and other pollinators visiting them. To see small tomatoes coming was a privilege and finally, tonight, we’re having a salad made with our

very own tomatoes and basil. We know them since the very beginning. To grow our own food is a process that grounds us to this place, it is a process that connects us with the surroundings and to the cycles of the sun. We are however, very far from being able to sustain ourselves with the food from the backyard. To grow our own food is also a process of hard work.

A sense of place comes through a relationship between people and space and it incorporates physical and social features, a place does not exist independent of us (Cross, 2001). From the anthropology perspective, place attachment includes cultural beliefs and practices that link people to place (Cross, 2001). According to him, this sense of place is important because one can only care about a place that he or she is connected to (Cross, 2001). The Sustainability Institute, at the same time is not only a building inside the first ecovillage in South Africa, it is a complex web of relationships between their staff, their students, their surroundings, their beliefs and their values. To connect the staff at the SI to the place is also to ground their 'ethos', their values in every action.

In this PAR work, food was the vehicle to connect people to the place, in this case, the staff of the Sustainability Institute with the SI and its surroundings.

Flening (n.d.) argues that sense of place involves history, geology, soils, climate, plants, animals and people and by the way we interact with these components.

As stated by Haider and van Oudenhoven (2015): "Food can be a powerful tool to break down or at least circumvent power relationships and help gain a deeper understanding of this place and its culture".

Food is a vehicle, a vessel, for different things. It evokes ideas, tastes and memories. "Using food as a method helps create a space which novel ideas emerge and can be expressed, and where old ideas can be excavated, dusted off and become part of an endogenous perspective on development" (Haider and van Oudenhoven, 2015).

## 2.7 Chapter summary

To produce food, a huge web of relationships has to exist: man's relationship with the earth, the relationship of microorganisms in the soil to the plant being grown, and even trade relationships between producer, distributor and ultimately the consumer. This huge web possesses all the characteristics listed by Cilliers (1998) when he describes a complex system.

This system as it stands today does not seem to work in achieving food security (FAO, 1996), much less food sovereignty (Desmarais & Wiebe et al., 2010). On the contrary, this system has promoted a huge discrepancy between the 1 billion human beings in a state of malnutrition and the 1.5 billion overweight people (Patel, 2012). In the middle of this abyss is the immense amount of food wasted worldwide, which equates to between 30% and 50% of all food produced on the planet (Institution of Mechanical Engineers, 2013; Stuart, 2009).

From production to distribution, corporations dominate the global food system. They will aim at profits as a top priority and will try to externalize social and environmental cost whenever it is possible (Bakan, 2004; Lichtfouse, 2009)

The products and by-products of HEI agriculture, given the suggestive name "Green Revolution" (Swilling & Anneck, 2012) include loans provided to already indebted farmers, genetically engineered seeds, expensive and wasteful irrigation systems, and going to war to ensure the processing and distribution monopoly in supermarkets (Reardon & Timmer et al., 2003).

Arguments around food systems are far from reaching a consensus. On one side, the use of technology (GMOs) and HEI techniques, will assure better yields and even reduce the pressure on land and the environment and will adapt better to the climate change (Sharp and Leshner, 2016; Nelson, 2001; Avery, 1997). On the other side, as organic agriculture cannot solve all the contradictions brought by the industrial (HEI) system (Badgley and Perfecto, 2007), at least it will assure a better income for small farmers and this is a way of compensating them for providing ecosystem services such as increasing biodiversity and also the water-holding capacity of the soil (Reganold and Wachter, 2016).

Food is far from a trivial matter, nor is it a problem in isolation. It is possible to link the various crises that plague our planet (Swilling & Anneck, 2012) with the

global food system (Landman, 2011). One of the biggest dangers facing our planet today is the consequences of our actions that try to meet our growing need for food (Foley, 2014).

It seems clear that our current food system must overcome some challenges in order to become sustainable. These challenges are related to issues such as the urban future that awaits us, social inequality, degradation of ecosystems, climate change, rising energy demand, a growing global population and food insecurity (Landman, 2011).

Yet the production of food through organic farming techniques seems to be able to change harsh social realities (Abalimi Bezekhaya, 2014), promote the intertwining of an entire community around urban gardens (Oranjezicht, 2014) or create new webs of relationships, linking micro and small organic producers to consumers (Green Road, 2014).

Although the Sustainability Institute is focused on the interconnection of social equity, ecology and innovation (Annecke, 2012), the role of food is unclear. A few interviews with the staff show food is not central to discussions and practices, although interest in the topic is growing (Curi, 2014; Bezuindehout, 2014; Anderson, 2014; Klink, 2014; Ward, 2014).

As the discussions around the better way to produce food cannot reach a convergence, the perspective of sense of place seems to be completely out of the discussion and food (Feagan, 2007) and one can only care about a place if he or she is connected to it (Cross, 2001).

The ultimate goal of this work is to attempt to change this reality at the SI, or at least raise awareness about the food served there, and inspire deep reflection and actions that promote better alignment between the values of the institution and the food that is produced and consumed there.

### **Chapter 3: Research Methodology**

*“When we think about threats to the environment, we tend to picture cars and smokestacks, not dinner. But the truth is, our need for food poses one of the biggest dangers to the planet.” (Foley, 2014).*

### 3.1 Introduction

In this chapter we explore the strategy that was created to answer the two main research questions:

- (A) As an institution dedicated to the teaching and practice of sustainable development, what is the role of food at the Sustainability Institute and what is consumed there?
- (B) How can a simple "cookbook", created and shared by the Sustainability Institute community, inspire reflection about the role of food at this institution?

To answer these questions, a mixed methods approach comprising of both qualitative and quantitative approaches was used.

These mixed method research activities consisted of four distinct phases:

- **Understanding the food system at the SI:** The goal of this phase was to spend time at the SI interviewing staff, becoming familiar with the descriptions of the educational modules offered, and observing the relationship between people and food.
- **The cooking sessions:** This phase involved the creation of a cooking game. The goal was to bring people together around food, encouraging reflection about the origins of and stories behind food.
- **Analysis of the food inputs at the SI:** Section 3.5 analyses all the food purchased by the SI (during 3 months in 2013 and the same 3 months in 2014), to discover trends over two different periods. These trends could be either buying more food from big retailers, or the opposite.
- **The digestion session:** Section 3.5 describes how the SI staff designed the future food system at the SI, after experiencing the cooking sessions and receiving feedback on the state of the current food system.

In Section 3.2 these four phases will be explained according to the research methods that were chosen. Section 3.3 is dedicated to an explanation of Participatory Action Research (PAR) that together with Complex Systems (described in Section 2.5) directs this body of work, while Section 3.4 specifically explains the Elos methodology. Section 3.5 details the research methodology and

process, and finally Section 3.6 offers a summary of Chapter 3 in its entirety.

## 3.2 Research design

Table 1 shows the research questions side by side with the overarching framework of PAR and Complex Systems. Some of the steps described in Table 1 took place simultaneously, which explains the grouping of the different phases described in the previous chapter. Figure 2 shows the research process in a time frame, helping the reader to understand how the process took place considering the time available.

The research process in Section 3.4 is covered as follows:

- **Understanding the food system at the SI:** covers Steps 1A, 1B, 2A and 4A.
- **The cooking sessions:** cover Steps 2B and 3B
- **Quantitative analysis of the food inputs at the SI:** covers Step 3A
- **The digestion session:** covers Step 4B

**Complex Systems (Cilliers, 1998; van Mill *et al.*, 2014) and PAR - Participatory Action Research (Whitmore, 2005; Barbera, 2008; Forrester, 2008; Laws, Harper and Marcus, 2003)**

|                |  |  |
|----------------|--|--|
| <b>STEPS A</b> | <u>Question A:</u> As an institution dedicated to the teaching and practice of sustainable development, what is the role of food and what food is consumed at the Sustainability Institute?  | Methods and methodologies used to answer Question A  |
| <b>1A</b>      | To understand the flow or path of the food inside the SI   | Semi-structured interviews (Lavrakas, 2008; Given, 2008)   |
| <b>2A</b>      | To understand the perspectives from members of the staff at the SI about the role of food in this institution  | Semi-structured interviews (Lavrakas, 2008; Given, 2008)   |
| <b>3A</b>      | To investigate all the food items bought at the SI during the period of March 2013 to May 2013 and the same period in 2014, trying to understand any trends or difference, possibly influenced by the invitation and/or cooking sessions | Quantitative research (Balhaves and Caputi, 2001)  |
| <b>4A</b>      | To analyse the different educational modules offered by the SI in order to understand how the theme of food is addressed in the classroom  | Reading of material provided by the SI, to describe the contents of every educational module offered |
| <b>STEPS B</b> | <u>Question B:</u> How can a simple cookbook created and shared by the Sustainability Institute's community inspire reflection around the use and role of food at this institution?  | Methods and methodologies used to answer Question B  |
| <b>1B</b>      | To spend at least twenty days immersed at the SI to observe the behaviour of students, staff and people living in Lynedoch, trying to understand the relationship between them and food  | Observational research (Sakind, 2010)  |
| <b>2B</b>      | To host an invitation session involving all the SI staff. The main objective is to share a meal together and introduce them to the PAR methodology that is the heart of this thesis.   | Focus group (Stewart, Shamdassani and Rook, 2007)  |
| <b>3B</b>      | To adapt the Elos methodology to create a game where the SI staff will be invited to reflect about their food choices by cooking together and sharing meals. These are the "cooking sessions".   | Elos methodology   |
| <b>4B</b>      | A "digestion session" will be hosted where the team will then reflect about the "cooking sessions" and engage to create a food system for the SI that is more aligned with the ethos of this institution.                                | Focus group (Stewart, Shamdassani and Rook, 2007)  |

Table 1: The research design for this work showing the steps used to answer the questions with Complex Systems and PAR being the overarching frameworks.

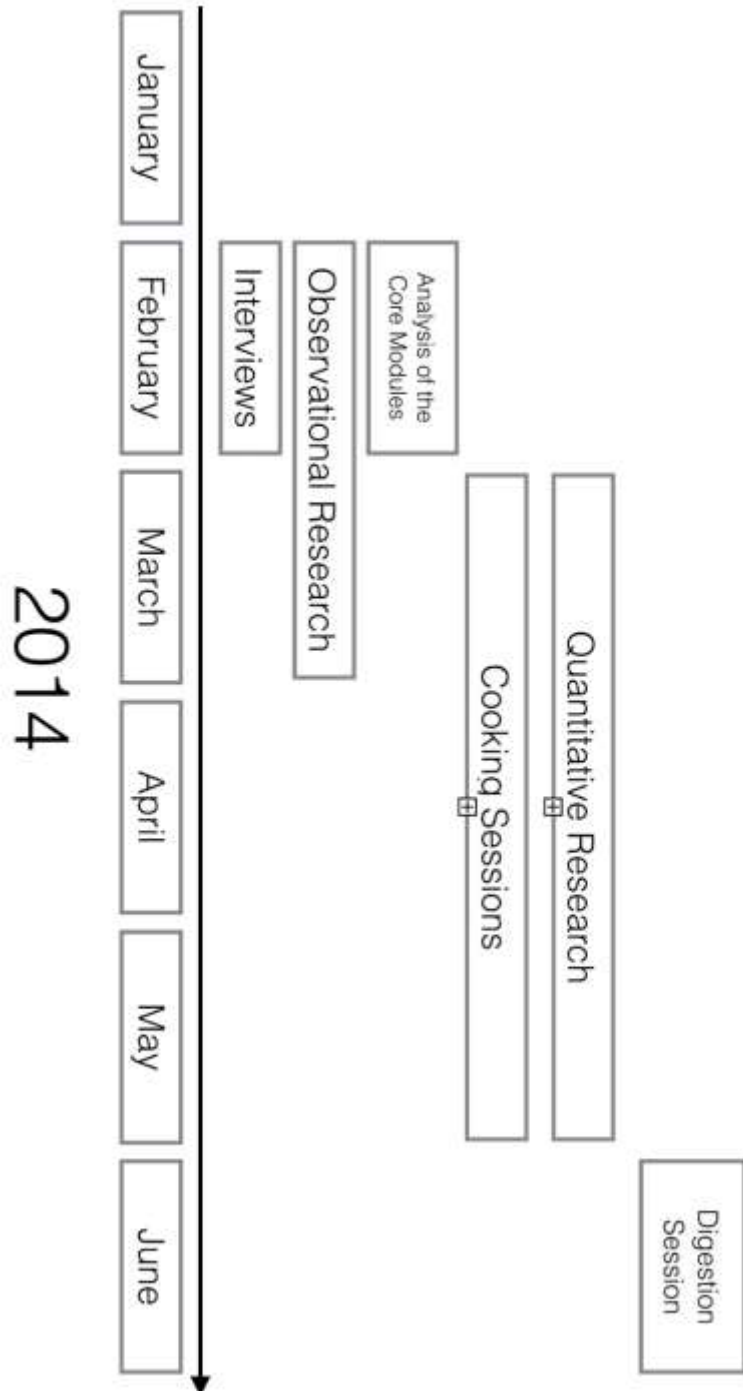


Figure 2: The research design – time frame



### 3.3 P.A.R. – Participatory Action Research

Key elements of this innovative research method are the direct involvement of the researcher and the researched in an attempt to change the reality of a whole community universe (Forrester, 2008; Barbera, 2008); not letting the process be too intellectualized; and recognising that emotions will be part of the journey and will certainly penetrate the research (Barbera, 2008). Although almost all forms of social research are motivated to inspire some kind of change, PAR has change and action as essential to its approach (Walter, 2006).

The term "action research" was created by Kurt Lewin and may be traced back over 60 years in the moments that followed the end of World War II in 1946, when he describes a spiral of action and reflection in which the goal was to solve a real problem. For Lewin the "participatory action" could be a way to practice democracy in countries in a post-war scenario (Robson, 1993).

Another important pillar of PAR is that the articulation of and solution to the problem comes from the community itself and not from an external element (in this case, a researcher) (Wadsworth, 2011). In regard to this research, it is important to highlight that the first perception of problems in the SI's food system did not come from me but from an employee – Tracy Ward - who sensed that something was not going well (Ward, 2014), as we shall see in Section 3.4.1. This perception was further confirmed during interviews and also from the data analysis found in Section 3.4.3. Therefore, the community in question legitimately generated the issue, as well as proposed solutions.

The use of PAR is undergoing a kind of rebirth, and along with the terms "action research" or "participation" describes approaches in which researchers become directly involved in solving real problems, or creating more knowledge underpinned by reality (Forrester, 2008).

Maggie Walter (2006) describes the key features of PAR quite simply when she says that, as the name implies, this approach is guided by its two keywords. The research must be something more than just "finding out": it should include as one of its components "action", which seeks to create positive change. The second keyword "participation" highlights the collaborative feature of this process where the community should also be involved.

The idea of PAR moves us away from the "outside expert" to firmly engage the researcher in solving a real problem in a real community (Walter, 2006). The use of PAR for this work was of fundamental importance since PAR, along with complexity theory, provided a theoretical background for the overall methodological approach. PAR is "*widely recognised as a powerful way of making change in complex situations*" (Laws, Harper & Marcus, 2003) and the core process itself allows participants to share perceptions about a problem, engaging and testing possible solutions. It is a process of shared learning for all involved, and validates the knowledge and intelligence of ordinary people (Laws, Harper & Marcus, 2003). Besides its orientation to action, Participatory Action Research has a better chance of leading to a solution because it involves those who best understand the problem and its context – the community members (Laws, Harper & Marcus, 2003).

The main objective of the use of PAR is to produce knowledge and action that is useful to a group in their struggle (Denzin & Lincoln, 1994). The processes of PAR can be used to improve local situations through two main objectives: the production of knowledge and action directly useful to the community, and empowerment through an expansion of consciousness. Both goals are achieved through the practice. The research methodology is conducted *with* people rather than *on* people (Savin-Baden & Wimpenny, 2007).

In addition to the use of PAR, a Brazilian methodology called Elos that is described in Section 3.4.2 was used to build a game where the staff at the SI, i.e. the community members, were involved. A game was developed and used with the main objective of bringing fun and engagement to this research work, and according to Kapp (2012), behaviour changes are a possible outcome of the process of gamification.

PAR and the Elos methodology (2013) complement each other. The first deals with the direct involvement of the researcher and the researched universe in a format geared to action around a real problem (Wadsworth, 1998) where cycles of action and reflection are an integral part of the method (Walter, 2006.) The second establishes a framework through steps that can help researchers with practical ways to engage a community around a common project, to which Elos (2013) gives a very powerful name: Dream.

Bennett (2004) however, suggests also some limitations to PAR. Relationships take time to be build and the community itself sometimes does not understand the benefits of that kind of research, and community members decline to participate.

### **3.4 The Elos methodology**

Transdisciplinary research, community-based research, interactive research have in common the fact that they focus on collaboration among academic (including scientists from different disciplines) and non academic stakeholders (i.e. from business, government and the civil society) aiming to address sustainability challenges and develop solutions (Lang et al., 2012). Elos methodology and Transdisciplinary Research (TD) have many overlaps but the first one was chosen due to the previous experiences of this researcher using it in different scenarios.

Although the Elos methodology (Elos, 2013) has not been applied in full, some of its elements have been added along this research trajectory, and Section 3.5.1, 3.5.2 and 3.5.4 use parts of this methodology.

The Elos methodology is mostly used in very poor communities in Brazil and around the globe, inviting them to take action, building something together (Elos, 2013). "We do not invite someone to suffer, usually we invite someone to have fun", says Edgard Gouveia Jr., during his opening speech at TEDxAmazônia event (TEDxAmazonia, 2011). He is one of the founders of the Elos Institute, an NGO based in the city of Santos, about 60 km from the Brazilian city of São Paulo (Gouveia Jr., 2011).

The methodology consists of seven steps that are not necessarily linear. In general, a group of volunteers trained in the methodology follows these steps, especially seeking to connect the different members of the community around a common dream. This dream is something that emerges from the community in question.

The first step, named the "Gaze", aims to encourage the community to seek abundance in their surroundings. Besides seeking to understand the local beauty, at this time participants also look for available resources, which can be anything from abandoned materials to natural resources that could be better used, such as bamboo that can be used in future construction.

The second step, called "Affection", focuses on people and their talents. The story of a community is told by its residents, often starting from the first inhabitants of the site, and describing the history of the place, gradually bringing names of other people who were important in the construction of the community settlement or who positively influenced the lives of others. Thus, each person ends up talking about one or more persons who live in the community, bringing a positive view of each through their talents and skills. These talents should in the later steps contribute to the achievement of the collective dream.

The third step, which can be interpreted as one of the most important, is represented by a word that can evoke various feelings, in general, positive. The "Dream" is the name given to this time when the whole community is invited to dream together and describe their hopes for the community. The idea is to try to find a common dream, to summarise at least a large part of the aspirations of the local inhabitants. With a focus on extremely poor communities mainly in Brazil, the experience of the founders of Elos Institute shows that the dreams of these people are generally very simple (Gabriel, 2013): a soccer field, a small playground for children, a square with plants and trees where they can sit and talk. Interestingly, during these days of construction, or "hand-on" as volunteers call it, all the action during this step happens in a "game framework". Cards, each one describing a different role, are distributed among the residents and volunteers. On each of these cards is a description of the role that the person should then take. Children are generally given a card called "Breeze". Because they are fast and have contact with the entire community, the role of the "Breeze" is to spread the news in cheerful and fun way. If anyone needs to borrow a hammer, for example, he or she will call in a "Breeze" who will start running through the community in search of that tool. Another role in this game is the "Hunter", who must be alert and always in search of material resources that can assist in constructing different buildings, for example.

After the Dream, there is a planning step, named the "Care". The Portuguese word "cuidado" is intended to convey the idea of taking care of that dream, and giving it enough attention. This becomes in practice an action plan that will put together the resources discovered during the Gaze, talents and stories discovered during the Affection, and the Dream of this community. In general, community residents and volunteers are divided into small teams that end up creating miniature models that will actually be built in the next step. These models are then adopted during a community meeting and serve as a guide for the step that follows.

With materials obtained in the community, talents of people who live locally, a common dream and a plan, this step is powerful and bold, aiming to make these dreams to come true. A sense of urgency is placed on the community so that energy is not dispersed and the work is not "left for tomorrow". Thus, in general, the construction of these dreams lasts only for a short period of time. In about 48 hours, the community with the help of volunteers can build soccer fields, orchards and gardens. The name of this step is the "Miracle".

The sixth step has a simple goal but is not the least important: the "Celebration". Here the community celebrates the feats accomplished. At this time, community and volunteers walk through the dreams that were built, sing, dance and celebrate the "Miracle".

The last step of this methodology can be considered the most important of all. With the action of outside volunteers who help and break the routine of everyday life of a community, it was quite common in the past for the communities to lose momentum or even stop maintaining the projects started. The inhabitants of those communities commonly returned to their routine (Gabriel, 2013), and soon the old habits returned too. Then the Elos Institute decided to create a new step, called "Re-evolution". At this stage, after a few days, volunteers return to the community to meet with residents and put together an action plan to be performed in the future by the residents themselves without the aid of external agents. At this time, leaders that have emerged over the weeks assume roles of responsibility for the future.

I have personally acted as a facilitator in the use of the Elos methodology during the time I worked with Anima Educação, the 6<sup>th</sup> largest group of private universities in Brazil. In general, more than one facilitator is necessary for optimal performance. The beginning of this research coincided with the beginning of discussions around food at the SI, facilitated by Tracy Ward, part of the SI team. To avoid a clash with her plans, I decided to adapt, or rather, to be inspired by the Elos methodology to help me create a stream of events that did not require much time from the SI team and at the same time could be incorporated into the day-to-day activities of the institution without much difficulty.

The main inspirations I took from the Elos methodology were the use of a game

that can be used to mobilise a community - as we saw in the third step of the methodology, the "Miracle" - and the giving of pleasure and joy through action within a community. The challenge that lies in Section 3.5.2 was to create a game within the community to bring this pleasure and joy. If Patel (2012) says that we are increasingly distant from the origins of our food and the pleasure of sharing a meal, I think this reconnection with food and its origin should therefore be a pleasurable activity.

The Elos methodology also involves the participation of the community in trying to find their own solutions to their problems, and the limitations might also be very similar to those pointed before in Section 3.3.

Table 2 below shows the relationships between ELOS and PAR:

| <b>Elos Methodology</b>                         | <b>PAR - Participatory Action Research / Cooking Sessions</b>   |
|---|---|
| The Gaze - To look for beauty                   | The quantitative analysis and the appreciation of other cultures.   |
| The Affection - The importance of relationships | The connection between the staff at the SI, sharing recipes and cooking together.                                 |
| The Dream - Dreaming together                   | Planning the meal to be served to colleagues at the SI  |
| The Care - Planning the Dream                   | Planning to create and serve that meal. The details of decoration, ingredients, story to be told during the meal. |
| The Miracle - Building the Dream                | The meals served during the cooking sessions  |
| The Celebration - Celebrating the Dream built   | The meals served during the cooking sessions  |
| The Re-Evolution - Planning for the future      | The digestion session   |

Table 2 - The connections and inspiration between Elos Methodology and PAR

### 3.5 Research methodology and process

This section describes the research experience at the SI according to the phases described at the beginning of Section 3.2, in order to answer both research questions (A) and (B) and cover two of the three basic objectives of the research:

- To understand the current state of the SI's food system in terms of its alignment with the SI's values (i.e. the education for a more sustainable world).
- To explore ways of improving the SI's food system through the engagement of all its employees.

The third and last research objective will be covered during chapters 4 and 5:

- To provide a list of recommendations, implementing whatever is possible during the writing of this thesis.

### **3.5.1 Understanding the food system at the SI**

Before taking any further steps or making any assumptions concerning food at the SI, it was important to understand how food flows through the SI and capture important information that would help to plan the next step.

This chapter will now explore four different steps as shown in Table 1, which aim to:

- Understand the flow or path of food inside the SI
- Spend at least twenty days immersed at the SI to observe the behaviour of students, staff and people living in Lynedoch, trying to understand the relationship between them and food
- Understand the perspectives from members of the staff at the SI about the role of food at this institution
- Analyse the different educational modules offered by the SI in order to understand how the theme of “food” is addressed in the classroom.

The Sustainability Institute in South Africa is one of the most innovative educational institutions on the planet (Gravatá & Piza et al., 2013). Their goal is to be the academic heart of Lynedoch Ecovillage (Swilling & Annecke, 2012) welcoming students from all over the planet for postgraduate, Masters and PhD programmes in sustainable development.

The classic definition of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987).

It contains within it two key concepts:

- The concept of 'needs', in particular, the essential needs of the world's poor, to which overriding priority should be given; and
- The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

Relying on a staff of 37 people (Bezuidenhout, 2014), the institute itself feeds and

is fed by a web of relationships that necessarily involve food. These 37 people are divided into teams or departments with specific functions inside the SI and who are involved in connected projects (Ward, 2014).

To understand the role of each department and the role of food at the SI, semi-structured interviews were used (Lavrakas, 2008; Given, 2008) and the page that is available on the SI website that describes the role of the staff (<http://www.sustainabilityinstitute.net/about/people-of-the-institute>). The semi-structured interviews do not necessarily have a list of questions to be asked (Lavrakas, 2008) but rather list a few subjects to be covered. In this case, these subjects were: the role of food at the SI, the flow of food inside the SI, the role of each project or department in the SI structure, and what the ideal food system at the SI could be. In order to simplify the understanding of the organisation of the staff at the SI, they were grouped according to their roles when it comes to food: producing, processing or simply consuming.

In terms of food production, Lynedoch has one dedicated area for growing food, located close to the road. Its production however cannot cover all the food needs at the SI or those of the Lynedoch Ecovillage (Anderson, 2014). The department of the SI responsible for the kitchen garden is called “Gardens n Grounds”.

The kitchen garden has a small team of two permanent gardeners and a leader, Bryce Anderson. The area occupied by the garden is virtually divided into two parts, which Anderson (Anderson, 2014) calls Garden 1 and Garden 2. The garden has an area for the production of seedlings that will be planted later, in addition to several beds dedicated to organic production of various vegetables such as carrots and potatoes, among others. Garden 2 does not produce steadily. It has longer beds and is an area dedicated to community work by PGD and MPhil students attending the Sustainability Institute. During community work, students are invited to work on the garden for about an hour and a half every day, fulfilling basic gardening activities such as removing unwanted species and planting vegetables, for example (Anderson, 2014).

Food processing is the responsibility of two different structures or SI departments:

- The Green Café: This is a small shop and restaurant located on the ground floor of the SI that sells various products to students, Lynedoch Ecovillage residents, SI employees and general visitors. Biodegradable



cleaning products, DVD documentaries, and non-GMO seeds are among some of the things that can be found on sale at the Green Café. The main focus however lies on providing hot and cold drinks such as coffee, tea, and soft drinks as well as snacks such as sandwiches or crackers that can be prepared in the small kitchen that is part of its structure and also serving pastries baked at the main kitchen in the Guest House (Davids, 2014). The Green Café is a way to promote sustainable development through first contact with visitors to the SI (Davids, 2014).

- The guest house: This is located near the SI within the village of Lynedoch and offers accommodation to students, teachers, volunteers and others who are participating in some kind of activity at the SI or in the village. The structure can also be used as a venue for different events from workshops to weddings (Davids, 2014). It is a way of hosting that aims to make visitors feel at home away from home (Davids, 2014).

Besides the rooms, the guest house has a kitchen that provides most of the food consumed by the SI staff, students and visitors. Every day, the kitchen at the guest house produces at least three different kinds of meals during the lunch time (Davids, 2014) because of very specific needs of different groups when it comes to nutrition or budget. This will be explained in more detail later in Chapter 4.

Both the Green Café and the guest house should follow a philosophy (Farm to Fork) that serves as a guide for both kitchens to arrange healthy and balanced food for children in the crèche and also to all those who attend the SI (Davids, 2014). To date, however, this philosophy has not been written or documented. In terms of food consumption, the main kitchen at the guest house produces at least three different kinds of meals during lunchtime according to the needs of different groups, as mentioned earlier. These meals were named A, B and C in Figure 3, which shows a simplified version of the flow of food at the SI. In Chapter 4 the reader will have contact with a broader version that will help to illustrate some of the research findings. For now it is important to understand the different meals produced by the main kitchen at the guest house and Green Café.

- Meal A: This is aimed at the students from the Postgraduate and Masters programmes, staff from the SI, as well as any visitors willing to pay for it. This is a vegetarian meal with no meat but sometimes made with eggs, milk or cheese (Davids, 2014), and is offered during the weeks when the

SI is offering an educational module. This meal aims to feed from 30 to 50 people.

- Meal B: This is provided to the children of the crèche (Nursery and Baby Centre) and it is prepared according to specific guidelines for nutrition and budget. It mainly contains meat - mostly fish or chicken - and must feed approximately 45 children according to Naledi Mabeba, leader of the Nursery and Baby Centre.
- Meal C: This is the meal provided for the youth programme (Change) that acts as a safety net, inspiring children and youth to become more autonomous and to have some occupation after school. During a few days a week, special activities take place such as soccer. According to Anton Otto from the 'Change' program, this meal must aim to feed approximately 80 people during these days; this meal is either vegetarian or contains meat.

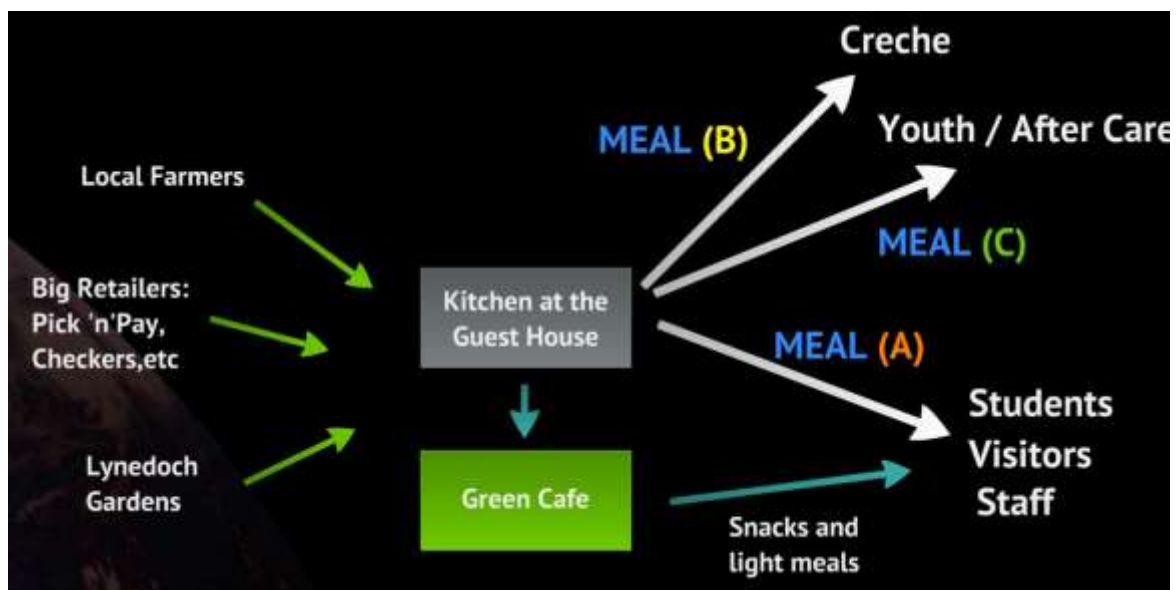


Figure 3: The simplified flow of food at the SI

Semi-structured interviews (Klink, 2014; Anderson, 2014; Bezuindehout, 2014) made earlier this year and detailed below suggest that food is something that has never been at the centre of discussions at the SI throughout its history. However there is a growing awareness of the subject (Klink, 2014) and this research has both raised the issue and created great interest around food. Interviews were held in conjunction with other activities such as the cooking sessions.

There seems to be a disconnect between what is grown in the vegetable gardens of Lynedoch and what is produced in the kitchen. The gardens seem to be isolated from the context of both the Sustainability Institute and the village of Lynedoch itself. While some residents have tried to grow their own food, momentum is soon lost and the activity is then abandoned. Often food is produced in gardens and after non-use is immediately discarded, a sad reality that could be called "farm-to-compost" (Anderson, 2014). Schulshenk (2010) suggests that while location may not be a key way to reduce the emission of greenhouse gases, it tends to promote sustainability by building a network, which increases the potential for enhancing the resilience of a community, accountability and the internalisation of social and environmental costs. Some interviews suggest that food is a sensitive topic at the Sustainability Institute, becoming almost frustrating (Ward, 2014). At the same time, some feel that the SI is at a moment of change, and food is one of the topics around which attitudes are also changing (Ward, 2014).

During the month of February 2014 the Sustainability Institute received Denise Curi, a Brazilian who worked as a volunteer at Schumacher College in the United Kingdom for about two years, a place dedicated to nature-based education, personal transformation and collective action (Schumacher College, 2014). Denise came to the SI at the invitation of Eve Annecke to stay at the guest house and share her views and experiences of her time working at Schumacher. To Curi (2014), who has experienced different diets throughout her life motivated by health reasons, taking care in the choice of ingredients and above all understanding how your body behaves in response to what you eat, are key issues.

Arriving straight from the Schumacher College, Denise was quite shocked at how people relate to food at the SI. Despite offering courses on "sustainable" agriculture in the Masters programme, or projects related to the Young Farmers, and compulsory community service in the garden, it seems that there is a disconnect. People work in the garden but then do not eat together. The kitchen at the guest house tries to buy organic food whenever possible or to take advantage of the gardens, but this is not reflective on the menus. At Schumacher College, food might not be centre stage, but it is certainly one of the stars. The founder of the college, Satish Kumar, works with a philosophy geared to three "Hs": hands, head and heart. Eating together is extremely important, as well as learning how to grow food and cook (Curi, 2014).

The Sustainability Institute is centered around Postgraduate and Master Courses, and the content of these are analysed by reading the material on the modules available on the SI website. A module duration is usually a full week, from 08h00 to 17h00 Mondays to Fridays, and mornings from 08h00 to 14h00 on Saturdays.

In 2014, the Sustainability Institute Master's program offered 24 core modules as options from which the Master's student can choose according to his or her interests and abilities. The full list, taken from the document "Master's Programme in Sustainable Development – PROSPECTUS 2014 is a public document and can be found at <http://www.sustainabilityinstitute.net/component/zoo/item/2014-prospectus-sustainable-development>. It can also be found in Appendix 1.

The list includes the following modules (Swilling, 2014):

- Foundation Module: Sustainable Development (compulsory)
- Applied Economics
- Biodiversity and Ecosystem Services
- Complexity Theory and Systems Thinking
- Development Planning and Environmental Analysis
- Development Planning Systems, Law and Policy
- Development Planning Theory and Practice
- Food Security & Globalised Agriculture
- Facilitation for Sustainability Transitions
- Ecological Design for Community Building
- Renewable Energy Finance
- Governance, Globalisation and Civil Society
- Introduction to Development Planning
- Leadership and Environmental Ethics
- Regional Food Systems
- Renewable Energy Policy
- Sustainable Cities
- Sustainable Enterprise
- Systems & Technologies for Sustainable Agriculture
- System Dynamics Modelling [Note: this is a two-week course]
- Renewable Energy Systems
- Bioenergy
- Introduction to Solar Energy

- Wind & Hydro Energy

As we can see, the words "food" and/or "agriculture" clearly appear in the titles of three of these modules. In addition, other modules have the same words in the description of their contents, as in the case of "Ecological Design for Community Building", which deals with content related to sustainable food and water supplies for the local communities, towns and cities and "Sustainable Cities" which deals with challenges to unsustainable urban systems for food supplies, waste, energy, water and CO<sub>2</sub> emissions. Therefore, of the 24 modules for the Masters and Postgraduate Diploma offered in 2014, five have a direct and explicit link to the theme of food and its production.

The interviews undertaken with some of the SI's employees suggest that food is not a central subject at the Sustainability Institute in practice. The theoretical part however shows that the theme is addressed in the classroom.

To add to this perspective, during February and March 2014 I decided to spend 20 days (4 weeks excluding the weekends) at the Sustainability Institute performing observational research (Salkind, 2010). The focus points were the Gardens n Grounds project and also the Green Café. These focus points were chosen because the Lynedoch garden is the main contact point (and the nearest one) between the population of the ecovillage, the staff and the students at the Sustainability Institute and the food that could possibly be consumed there, and the Green Café, because it is a gathering area where students, staff and visitors come into contact with each other in informal conversations and also with food sold on the SI premises.

During this period I spent my days writing at the Green Café and also on a bench in the gardens. My intention in the gardens was to observe the interaction between people and food that is produced nearby (more precisely, 120 meters away from the main door at the Sustainability Institute) and to hear conversations and reflections around food at the Green Café.

Tables 3 and 4 show in detail the time (hours) and days spent at the Green Café and the gardens (Gardens n Grounds).

| FEBRUARY 2014 |         |           |          |        |          |        | TOTALS |
|---------------|---------|-----------|----------|--------|----------|--------|--------|
| MONDAY        | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY | SUNDAY |        |
|               |         |           |          |        | 1        | 2      |        |
|               |         |           |          |        |          |        |        |
| 3             | 4       | 5         | 6        | 7      | 8        | 9      |        |
|               |         | 2         | 2        | 1      |          |        | 5      |
|               |         | 2         | 2        | 1      |          |        | 5      |
| 10            | 11      | 12        | 13       | 14     | 15       | 16     |        |
| 3             |         | 3         | 3        | 1      |          |        | 10     |
| 1             |         | 1         | 1        | 1      |          |        | 4      |
| 17            | 18      | 19        | 20       | 21     | 22       | 23     |        |
| 3             |         | 3         |          | 3      |          |        | 9      |
| 1             |         | 1         |          | 1      |          |        | 3      |
| 24            | 25      | 26        | 27       | 28     |          |        |        |
| 1             | 3       | 3         |          | 1      |          |        | 8      |
| 1             | 1       | 1         |          | 1      |          |        | 4      |
|               |         |           |          |        |          |        |        |
|               |         |           |          |        |          |        |        |

**GC** Time spent at the Green Café (hours)  
**GG** Time spent at the Gardens and Grounds (hours)

|       |    |
|-------|----|
| Total | 32 |
| Total | 16 |

Table 3: Time spent at the Green Café and Gardens n Grounds – February 2014

| MARCH 2014 |         |           |          |        |          |        | TOTALS |
|------------|---------|-----------|----------|--------|----------|--------|--------|
| MONDAY     | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY | SUNDAY |        |
|            |         |           |          |        | 1        | 2      | 0      |
|            |         |           |          |        |          |        | 0      |
| 3          | 4       | 5         | 6        | 7      | 8        | 9      |        |
|            |         |           |          | 2      |          |        | 2      |
|            |         |           |          | 2      |          |        | 2      |
| 10         | 11      | 12        | 13       | 14     | 15       | 16     |        |
|            |         |           |          |        |          |        | 0      |
|            |         |           |          |        |          |        | 0      |
| 17         | 18      | 19        | 20       | 21     | 22       | 23     |        |
|            | 2       | 3         |          | 1      |          |        | 6      |
|            | 2       | 1         |          | 1      |          |        | 4      |
| 24         | 25      | 26        | 27       | 28     | 29       | 30     |        |
| 3          | 3       | 3         | 1        | 1      |          |        | 11     |
| 1          | 1       | 1         | 1        | 1      |          |        | 5      |
| 31         |         |           |          |        |          |        |        |
| 2          |         |           |          |        |          |        | 2      |
|            |         |           |          |        |          |        | 0      |

**GC** Time spent at the Green Café (hours)  
**GG** Time spent at the Gardens and Grounds (hours)

|       |    |
|-------|----|
| Total | 21 |
| Total | 11 |

Table 4: Time spent at the Green Café and Gardens n Grounds – March 2014

The students visited the gardens at Lynedoch on a daily basis during the week modules during their compulsory community work every morning. Besides the students, no one from the Lynedoch community, including the staff and students from the SI, was seen interacting with the gardens, whether planting or harvesting. The only people interacting with the gardens were the staff dedicated to this task under the leadership of Bryce Anderson. This observation confirmed the perspective that the garden and the community are virtually disconnected (Anderson, 2014).

### **3.5.2 The cooking sessions**

*"Cooking is the most private and risky act. In food stands tenderness or hate. In the pan we pour seasoning or poison. Cooking is no service. Cooking is a way of loving others." Translated by the author from Couto (2009).*

I assume that most of us somehow have had direct contact with a cookbook or at least heard of one. Cookbooks are mostly examples of "harmless" literature, which are not intended to handle large academic dilemmas, much less planetary crises.

Instead of simply writing a cookbook myself, the idea was to create an experience, a game, where all the staff at the SI could participate in creating this book, at the same time interacting with each other and with food in a meaningful way. Some researchers call the creating of games as a learning tool a "gamification process" (Koster, 2005; Tekinbas & Zimmerman, 2003).

Gamification cannot be described by a single discipline or single curriculum (Koster, 2005; Tekinbas & Zimmerman, 2003). Play is more than a physiological phenomenon or psychological reflex, it transcends the needs of daily life and imparts meaning to action (Huizinga, 1955). Play doesn't just come from the game itself, but from the way that players interact with the game, and good games are meaningful (Tekinbas & Zimmerman, 2003).

As described before, the Elos methodology (Elos, 2013) helps to connect a whole community around one or several community dreams, and this dream is built using a "game" framework. To invite and especially to encourage the participation of each person at the SI in this cookbook, the first step was to provide an example. If people were supposed to interact with each other and to cook for each other, I thought that I should start doing it first myself. I then decided to organise a

“Brazilian Lunch” for the presentation of the idea of this thesis to the wider staff (figure 4). This presentation happened on 18 February 2014 and served both as a lecture about the origins of a Brazilian “Feijoada” and an open invitation for the SI staff to participate in this game. The Brazilian “Feijoada” is a dish that can be found throughout the Brazilian National territory. Its origin dates back to the era of colonialism when slaves, brought mostly by the Portuguese from Africa, were forced to cook meals from leftovers of their owners, often mixing the beans with less “noble” parts of the pig, such as feet, ears, tail and even other types of meat (Carneiro, 2005). Before this Feijoada however, all staff could attend a presentation where key elements of the dish were pointed out: its history, and the origin of each ingredient.

*We invite you to share a meal (for free)*

WHERE: The Guest House

WHEN: February 18th, 12h30

WHAT TO BRING: Your body, soul and mind

*Shima*



Figure 4: The invitation to the Brazilian Feijoada

Furthermore, the presentation also contained the idea of creating the cookbook. The first step for those who wanted to participate in this experiment would be to put their name on a piece of paper and then put this paper in a small basket. Participation was voluntary and not compulsory. Then, through a random draw, each participant was allocated to a cooking team (table 5). A schedule was created for the cooking teams to cook for the entire SI staff. During that day on the



schedule, the team would gather and cook according to a specific theme with an almost unlimited budget (sponsored by this researcher).

To inspire and challenge the teams, three themes were available: “Local”, “Family” and “Africa”. These themes in turn were intentionally described in a very simple way, allowing many different interpretations by each team.

| TEAM 1<br>FAMILY<br>04/04/2014 | TEAM 2<br>AFRICA<br>09/05/2014 | TEAM 3<br>LOCAL<br>14/03/2014 | TEAM 4<br>AFRICA<br>02/05/2014 | TEAM 5<br>LOCAL<br>07/03/2014 | TEAM 6<br>FAMILY<br>11/04/2014 |
|--------------------------------|--------------------------------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|
| Luke Metelerkamp               | Olivia Erasmus                 | Shaun Claaser                 | Rosie Downey                   | Louise Bezuidenhout           | Tracy Ward                     |
| Eve Anneck                     | Alvona Hopley                  | Ivoritha Nortje               | Anton Otto                     | Katli Mabeba                  | Mathilda Davids                |
| Terence Ward                   | Bryce Anderson                 | June Stone                    | Mark Swilling                  | Meagan Mavandai               | Tania Klink                    |
| Ranen Swilling                 | Manda Mabeba                   | Thembisile Memela             | Chantelle Scott                | Litha Magida                  | Rene Human                     |

Table 5: The cooking teams and themes

The following sentences were used to describe the theme:

- *What does LOCAL mean to you? Use as many local products as you can. Explore. Challenge yourself and your team.*
- *Indigenous. In this challenge you have to cook with as many indigenous ingredients from AFRICA as possible, that you usually don't find in a supermarket.*
- *FAMILY. Share recipes from your family with your team. Why does your family cook that recipe?*

The format of the draw was intended to define the composition of each team by date and theme and allowed the teams to mingle, and people who did not normally work together found themselves side by side in the kitchen.

What would the SI staff cook if there were no limits to the budget? What kind of ingredients would they choose? Where would these ingredients come from? Questions such as these were important to help understand the choices made on a daily basis.

The findings and detailed description of the cooking sessions are presented in Chapter 4.

### **3.5.3 Quantitative analysis of the food intake at the SI**

To complement the interviews of the staff, a deeper analysis was needed to understand where the food that is bought at the SI comes from. Data was collected from March 2014 as this was the start date of the interventions arising from the cooking sessions. Due to the huge amount of data, it made sense to analyse just three months of purchases in 2014 and to compare these numbers with the same three months captured in 2013.

These periods were chosen mainly because of two factors:

- a) Student intake: According to the Prospectus 2014 (Appendix 1), the month of February usually contains the compulsory module “Foundation Module on Sustainable Development” and it is the official start of the academic year at the Sustainability Institute. This is a very busy period where the kitchen starts cooking and offering menus to the new students. As a compulsory module, the whole student intake for that year must be present, which brings up to 50 new students to the complex. As this only happens during February, I decided to avoid this month.
- b) Cooking sessions: These were held during the months of February, March, April and May in a way to compare the food purchasing during the cooking sessions with those of the previous year, and avoiding the condition showed above, the obvious period comparison would be March, April and May. The limitation of this comparison however is that the period after the cooking sessions was not analysed, which could have brought important evidence about trends. This analysis was not done because of limitations to time and funds.

To perform this analysis, all receipts for purchases from March, April and May of the years 2013 and 2014, listing 2,098 items and their different sources, were

scanned and compiled (Appendix 2). A quantitative analysis of these items (Balnaves and Caputi, 2001) was used, looking for a simple majority through univariate statistics (Muijs, 2014).

All purchases made at the SI go through an approval system of the leaders of each team and/or department, and the payments are recorded in the financial department, headed by Rene Human. Rene allowed access to all documents that were proof of payment of all food bought at the SI over this period, for research purposes.

Any type of food found in the receipts was recorded in a spreadsheet (see Appendix 2) noting:

1. When the purchase was made: In this case, clarifying in which of the six researched months the purchase took place.
2. Which team made the purchase: The SI teams buy food for various purposes, from personal consumption, to selling it on at the guest house or Green Café, to providing meals to the daycare programme which is part of the village of Lynedoch.
3. What was bought: This is a brief description of the type of item. This description is very important for the search results discussed later in Chapter 4.
4. Where it was purchased (supplier): This describes the immediate source of the food, which could be bought from Lynedoch garden or a supermarket, for example.
5. How much it cost: The cost of each item is displayed in South African rands.

Unfortunately the analysis of cash receipts did not allow quantification by weight (kg) of each type of food consumed, as a detailed description of the items was not always part of these documents.

Examples of the cash receipts can be seen in Appendix 3.

## **Classifying the food items**

At first I had thought of classifying foods as processed or unprocessed, trying to somehow connect the consumer to potential production sources, but this characterisation of food is not an easy or simple process. Forms of processing a food from its natural state are numerous, and extremely detailed (Singh & Heldman, 2001; Fellows, 2000) and as the main objective of this thesis is not to technically describe the food, I decided to create a very simple system that assigned grades to each of the food items purchased at the SI. This point system could be proposed as an indicator for every meal prepared at the guest house or Green Café, and is explained later in this chapter.

This system has flaws that may become future research opportunities, as described in Chapter 5, but it was created in an attempt to discover a trend as it values local and organic food, and devalues food from the industrial system. This is to evaluate the alignment or misalignment between what is consumed at the SI and the values that this institution promotes. These values can be summarised as: seeking to combine theory and practice, promoting learning about a more sustainable way of life, with special reference to poverty eradication, in addition to providing space for people to have the chance to explore and create through theory and practice, a more egalitarian society and life in order to sustain and not destroy the environment in which it immersed (Sustainability Institute, 2012). The largest driver of destruction of the environment seems to be the production of food to feed humanity (Foley, 2014; Rockström, 2015). Therefore the focus on food production seems to be very important when we talk about sustainable development.

## **Description of the point system**

In order to propose a simple system that could help to point out the origins of food bought at the Sustainability Institute, I developed a point system that could be used in the near future.

In this system there are three categories of scores:

- One point was awarded for each food item that was purchased in large retailers and suppliers, where, in general, it is quite difficult to know with precision the exact origin of the food, the type of agricultural methods

used, or the process or journey by which the food reaches the consumer. An example of this could be large supermarket chains seeking to create a monopoly over food distribution around the world, including South Africa (Reardon and Timmer et al, 2003; Jackson, 2012). These companies were assessed through their websites where information about the large number of employees, a clear expansion strategy, and listing on the stock exchange, in addition to information about the five major food retailers present in South Africa (Jackson, 2012), placed them in this category.

- Two points were awarded for each item purchased from small cooperatives that have direct contact with the producer of that item and promote organic agriculture, and also act in the social sphere, promoting poverty reduction in that they shorten the path between producer and consumer. The exact origin of each food item can be easily traced; it is possible in these cases, to gain access to the farmer directly (Green Road, 2014) if necessary. This category score is also applied where the product was purchased directly from the producer and where only organic and/or biodynamic farming techniques are used.
- Three points were awarded for each item purchased or extracted directly from the gardens and orchards of Lynedoch ecovillage, which are produced according to organic farming techniques and observe important factors such as seasonality, drastically reducing any need for artificial inputs (Anderson, 2014). This fulfils the purpose of joining the SI's theory and practice, to the extent that the grounds and gardens of Lynedoch are the place of compulsory community work and routine day- to-day activities for hundreds of students who pass through there every year.

Adding all the points assigned to all purchased food and then dividing this value by the total number of items, we arrive at a number of between 1 and 3. If all food consumed at the SI was purchased from major supermarket chains, we would have a score of 1. Otherwise, if all food items were picked or bought from the gardens and orchards of Lynedoch, we would have a score of 3. Therefore, the approximation of values around 1, points directly to a consumer that feeds the immense chain that has as its major objective the monopoly of our food systems, either in its production (Patel, 2012) or in its distribution (Patel, 2012; Reardon and Timmer et al, 2003.).

The giving of the highest score to locally produced items through organic farming technologies is intended to show these categories as being more sustainable than the industrial system of production, processing and distribution. Future challenges such as population growth, the rising tide of urbanisation, climate change, ecosystem degradation and oil peak should certainly change the ways we produce and distribute food, thus, aiming to create local systems of food production may be an alternative while building environmental, social and economic capital at the community level. At the same time it can increase the resilience of the community to absorb shocks and cope with future crises. Furthermore, it could contribute to a stronger local food economy in Stellenbosch, where the SI is located, and has the potential to create opportunities that will ultimately help address challenges such as poverty and inequality (Schulschenk, 2010).

Those suppliers who do not fit into one of the three categories were removed from the calculation to avoid distortions. In summary, Category 1 basically describes a group of large supermarket chains with expansionist characteristics, Category 2 describes the cooperative Green Road (Green Road, 2014) as their characteristics and intentions connect with the ethos of the SI, and pay special attention to poverty reduction. Category 2 also describes small producers that use only organic and/or biodynamic technologies to produce food. Finally, Category 3 deals exclusively with the food that comes from the gardens at Lynedoch.

The scoring system is not perfect yet, but on the other hand presents a solution that simplifies the analysis of the market receipts through a single numerical indicator. This indicator is the result of a formula in which the total sum of points for all items in a given period is divided by the total number of items in the same period. An average score of 3 points would mean that all the food items at the SI would be coming from their own production in the home gardens of Lynedoch (Gardens n Grounds). Likewise, an average score of 1 point would suggest exactly the opposite, showing that all the food items purchased by the SI comes from large retailers.

#### **3.5.4 The digestion session**

On 27 June 2014, 14 of the 24 participants of the cooking sessions gathered to reflect on the learning and, more importantly, to think and plan the future of the SI food system together. Here, the staff were divided into groups to discuss and reflect about the journey so far. Focus groups were used (Stewart, Shamdasani

and Rook, 2007) but the method was adapted to stimulate a larger number of different connections.

To encourage a light and joyful conversation, where different opinions could be expressed freely, I decided to use the methodology of the "World Café" (Brown and Isaacs, 2005). This allows collective construction, with everyone engaging in the conversation. Using the World Café methodology is something quite common throughout the various stages of the Elos methodology (2013) and here it seemed to fit perfectly in the context of the discussion.

In order to understand what happens during a session of a World Café (Brown and Isaacs, 2005), I will briefly describe how it works:

Divided into groups seated around tables, each group has at its disposal paper, coloured pens and other materials that can be used to encourage personal expression. Each table chooses a "host" who will be responsible for allowing each person at the table to voice their opinions, as well as being responsible for giving a brief summary of the conversation at a time called "the harvest." A facilitator raises questions and the groups then discuss the matter. After the discussion (which usually happens in a short period of time, from about 5 to 15 minutes), each person chooses a new table, new groups form, and the process begins again as many times as necessary to have several conversations between all sorts of people. It is very important to remember that the "host" must summarise the talks held at the tables. Thus, the opinions they express are a summary of the range of views expressed during the discussions. For research purposes, these summaries of the ideas, feelings and aspirations of the entire staff at the SI were harvested.

The digestion session had three different parts that were named respectively: past, present and future. During the "past" session, I made a brief presentation to the group on the definition of the food system and its complexity, and gave some world statistics mainly linked to the issue of food waste (Stuart, 2009; Lymbery, 2014) and concentration of power in the hands of several global corporations throughout the various stages of the food system (Patel, 2012). What I called the "present" was a moment to remember the cooking sessions, reflect on the learning and then think and act about the future, dreaming and planning a new food system for the SI.

The "past" session was quite expository and the group seemed fairly surprised at the amount of food waste in the world. The most important data connected directly to the context of SI was also presented in a summary table (discussed in Chapter 4), showing the origin of all food purchased by the SI over a three month period in 2013 and the same three months in 2014 (as described in Section 3.5.3). It included a special focus on the grouping of purchases from large supermarket chains, to the clustering of purchases from Lynedoch gardens, and finally, the group of purchases from the Green Road project.

The "future" session's discussion was focused on how the food system at the Sustainability Institute should look, and what would be the key ingredients for that future model to happen.

The results of these discussions are shown in the Chapter 4.

### **3.6 Chapter summary**

In order to address the two research questions, a few steps were planned and a mix of methodologies were used (Table 1). The overarching methodological framework however is Complexity Theory (Cilliers, 1998) and PAR – Participatory Action Research (Whitmore, 2005; Barbera, 2008; Forrester, 2008; Laws, Harper & Marcus, 2003).

In order to first understand the role of food at the Sustainability Institute, a series of interviews were undertaken with members of the staff that reflected an opinion that food is placed at the boundaries of discussions but not "at the center of the table" (Klink, 2014; Bezuidenhout, 2014; Anderson, 2014). A simple analysis of the modules taught showed that five modules out of a total of 24 showed a clear connection with the theme of food.

The education promoted by the Sustainability Institute seems to be in line with its ethos and purpose, which is: seeking to combine theory and practice, promoting learning about a more sustainable way of life, with special reference to poverty eradication, in addition to providing space for people to have the chance to explore and create through theory and practice, a more egalitarian society and lives, in order to sustain and not destroy the environment in which it is immersed (Sustainability Institute 2012).



Food and sustainable development are subjects clearly connected (Foley, 2014; Rockström, 2015), and according to the words of Philip Ackerman-Leist (2013): *"What happens in your kitchen, happens in your landscape"*.

The semi-structured interviews (Lavrakas, 2008; Given, 2008) undertaken with members of the SI staff echo the results of the quantitative analysis (Balnaves & Caputi, 2001) that showed that the largest majority of all food consumed and processed at the SI comes from large retailers, thus supporting this kind of economy and contradicting the education it promotes.

To address this subject and dichotomy, a "bottom-up" reflection was used instead of a "top-down" approach. The methodology of PAR - Participatory Action Research (Barbera, 2008) complemented the Brazilian Elos methodology (Elos, 2013) as the latter frames seven steps of action starting from a recognition process, through an experience of building a common dream and finishing by looking at the future.

The whole process of cooking together culminated in a session where the staff was invited to plan the future of the food system at the SI in the digestion session.

Table 6 below is a summary of the research effort. The next chapter will summarise the research findings during these various steps of the research process.

| Complex Systems (Cilliers, 1998; van Mil et al., 2014) and PAR - Participatory Action Research (Whitmore, 2005; Barbera, 2008; Forrester, 2008; Laws, Harper and Marcus, 2003)              |  |   |  |   |   |
|---|--|---|--|---|---|
| STEPS A   |  | Research effort   |  | STEPS B   |   |
| <b>Question A:</b> As an institution dedicated to the teaching and practice of sustainable development, what is the role of food and what food is consumed at the Sustainability Institute? |  |   |  | <b>Question B:</b> How can a simple cookbook created and shared by the Sustainability Institute's community inspire reflection around the use and role of food at this institution? |   |
| <b>1A</b>   | To understand the flow or path of the food inside the SI   | 4 interviews with staff members at the S.I. / 1 interview with volunteer working at the S.I. (please refer to appendix 4) |  | <b>1B</b>   | To spend at least twenty days immersed at the SI to observe the behaviour of students, staff and people living in Lymedoch, trying to understand the relationship between them and food                   |
| <b>2A</b>   | To understand the perspectives from members of the staff at the SI about the role of food in this institution  | 4 interviews with staff members at the S.I. / 1 interview with volunteer working at the S.I. (please refer to appendix 4) |  | <b>2B</b>   | To host an invitation session involving all the SI staff. The main objective is to share a meal together and introduce them to the PAR methodology that is the heart of this thesis.                      |
| <b>3A</b>   | To investigate all the food items bought at the SI during the period of March 2013 to May 2013 and the same period in 2014, trying to understand any trends or difference, possibly influenced by the invitation and/or cooking sessions | 2,098 items were analyzed during this period. (Please refer to appendix 2)  |  | <b>3B</b>   | To adapt the Elos methodology to create a game where the SI staff will be invited to reflect about their food choices by cooking together and sharing meals. These are the "cooking sessions".            |
| <b>4A</b>   | To analyse the different educational modules offered by the SI in order to understand how the theme of food is addressed in the classroom  | Analysis of 24 educational core modules offered by the S.I. (please refer to section 3.5.1)                               |  | <b>4B</b>   | A "digestion session" will be hosted where the team will then reflect about the "cooking sessions" and engage to create a food system for the SI that is more aligned with the ethos of this institution. |
|   |  |   |  |   | 53 hours spent at the Green Café and 27 hours spent at Gardens and Ground (please refer to figures 6 and 7)   |
|   |  |   |  |   | Please refer to the appendix 5 and section 3.5.2  |
|   |  |   |  |   | 24 members of the staff cooked meals during 6 different cooking sessions. At least 207 meals served using at least 178 different ingredients. (Please refer to Chapter 4).                                |
|   |  |   |  |   | 14 participants from the cooking teams discussed the whole process of the cooking sessions and pointed out a "future food system" for the S.I. (Please refer to Chapter 4).                               |

Table 6: Summary of the research effort

## Chapter 4: Research findings

### 4.1 Overview of findings

Questions A and B were answered in four different steps (1A, 2A, 3A, 4A, 1B, 2B, 3B and 4B) for each query, and a summary of the findings of each step is now presented.

To reiterate, the questions were:

(A) As an institution dedicated to the teaching and practice of sustainable development, what is the role of food and what is consumed at the Sustainability Institute?

(B) How can a simple cookbook, created and shared by the Sustainability Institute community, be used to inspire reflection about the role of food at this institution?

Some of the findings were only revealed because I decided to spend another 13 days (during February 2015) in the kitchen of the guest house, cooking with the two main cooks, rather than observing or formally interviewing people. Immersing myself in cooking and helping with the preparation of food in the kitchen allowed me to participate in informal conversations and to hear opinions that were not clear before. This proved to be an essential decision that helped bring to the surface some perceptions that were not clearly expressed during the interviews and previous observations. It is true that we must not underestimate the kitchen and what happens there if we want to understand and relocalize food systems (Ackerman- Leist, 2013).

Table 7 shows in detail the investment of time in the kitchen at the guest house:

| FEBRUARY 2015 - KITCHEN |         |           |          |        |          |        |
|-------------------------|---------|-----------|----------|--------|----------|--------|
| MONDAY                  | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY | SUNDAY |
|                         |         |           |          |        |          | 1      |
| 2                       | 3       | 4         | 5        | 6      | 7        | 8      |
|                         | 3       |           | 3        | 2      |          |        |
| 9                       | 10      | 11        | 12       | 13     | 14       | 15     |
| 4                       | 4       | 4         | 4        | 4      |          |        |
| 16                      | 17      | 18        | 19       | 20     | 21       | 22     |
|                         | 3       |           | 3        | 3      |          |        |
| 23                      | 24      | 25        | 26       | 27     | 28       |        |
|                         |         |           | 3        | 4      |          |        |

IN TOTAL 44 HOURS SPENT IN THE MAIN KITCHEN AT THE GUEST HOUSE

Table 7: Time spent in the guest house's main kitchen during 2015

#### 4.1.1 Step 1A: To understand the flow or path of the food inside the SI

There are two different points where food is processed at the SI: the small kitchen at the Green Café and the main kitchen at the guest house. The café is focused on light meals offered to students, staff and visitors. The main kitchen, however, provides three different kinds of lunches on a daily basis for three different groups (Figure 3) – the children from the crèche, the youth from the aftercare programme, and the students, staff and visitors. Most of the food is bought from large retailers (details are shown in 3A) with a smaller part coming from the gardens of Lynedoch and surrounding farms. A deeper investigation, however, shows that the flow of food into the SI is far more complex. According to the two main cooks at the kitchen in the guest house (Meagan Mavandal and Alvona Hopley) the crèche and the aftercare buy their own ingredients and send them to the kitchen, and then the kitchen prepares the food and sends it back to the crèche and aftercare. Figure 5 shows the food system at the SI in more detail:

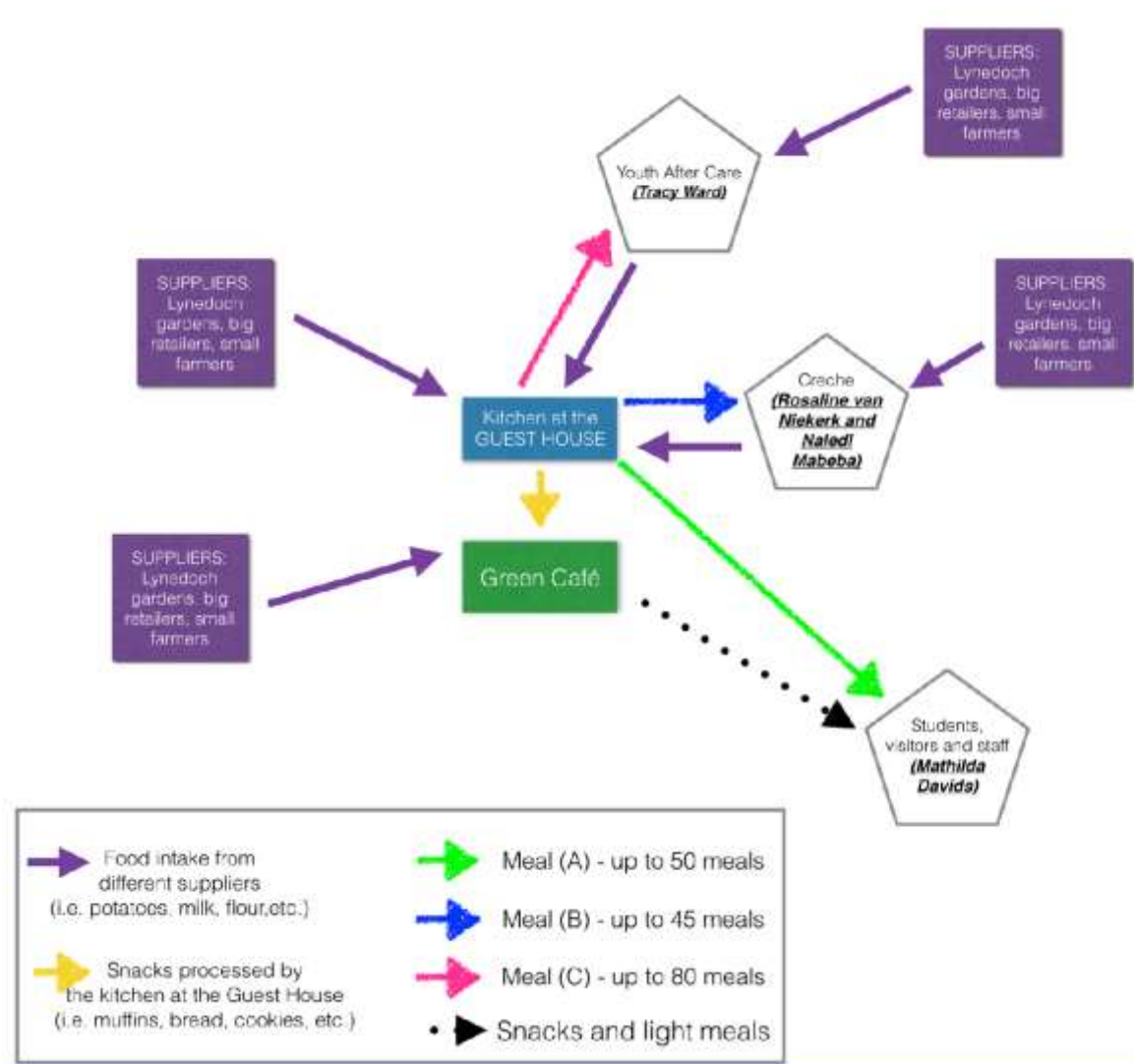


Figure 5: The flow of food at the Sustainability Institute

The key persons deciding what meals A, B and C will consist of are Mathilda Davids, Rosaline van Niekerk and Naledi Mabeba, and Tracy Ward respectively. The meals (A, B and C) are different from each other mainly due to the budget that each one of the projects (i.e. youth aftercare, crèche) has dedicated to food.

The food offered for the students, staff and visitors (i.e. Meal A) decided by Mathilda Davids must take into consideration that it must be vegetarian and also sometimes, depending on demand, accommodate specific dietary restrictions like gluten-free meals.

Rosaline van Niekerk and Naledi Mabeba responsible for the menu at the crèches (i.e. Meal B) will look for low budget options and request a fun presentation of the food to encourage the children's interest. Another important factor for them is to include animal protein (i.e. fish, chicken or beef) at least twice a week in order to

“improve nutrition” for the children.

Tracy Ward, responsible for making the decisions about the food served to the youth aftercare (i.e. Meal C) seems to be always worried about the budget, mostly on Thursdays when her budget drops to R10.00 per person.

A few characteristics of this food system bring a very specific dynamic to the main kitchen:

- Meals are planned by four different people (Tracy Ward for the youth aftercare, Rosaline van Niekerk and Naledi Mabeba for the crèche, and Mathilda Davids for the students, staff and visitors).
- The ingredients for these meals might be completely different from each other (for example: biryani for the youth, pasta with fish for the children at the crèche, and vegetarian moussaka for the students, staff and visitors).
- These ingredients are procured independently by each one of the planners.
- Each meal is served at different times of the day: 11:00am – 11:30am for the children at the crèche, 11:30am – 12:00am for the youth and 1:00pm for the students, staff and visitors.

Every morning Mathilda Davids will host a morning meeting with the staff of the kitchen and tell them about the menus for the day. The ingredients to be cooked will come to the main kitchen in the guest house during the first hours of the morning (i.e. 09:30am) and will be prepared by Meagan Mavandal and Alvona Hopley, and then sent back to each one of the groups.

Each one of the groups is operating in a separate way like an isolated system inside of a bigger system. The fact that the menus are planned in isolation from each other is possibly limiting improvements to the overall food system. From a complex system perspective (Cilliers, 1998; van Mil et al., 2014), feedback loops seem to be absent or very timid to say the least and parts of the system are ignorant about the whole.

One key connection and feedback loop that seems to be lost is the link between the main kitchen and Lynedoch gardens, since most of the gardens' production ends up in the compost pile. This disconnect can be illustrated by the following story:

On one February morning, Bryce Anderson, the master gardener responsible for the gardens of Lynedoch, told me to harvest all the basil available otherwise he would lose it. When asked why he would “lose it”, Bryce told me that *“the people from the Guest House don’t know what to do with this, if I send it there it will end up in the trash bin.”*

Before harvesting the basil, however, I went to the kitchen and spoke with the two main cooks, Megan and Alvona, asking if they would like to make some pesto (i.e. Italian origin sauce made with basil, olive oil and garlic). Alvona said *“I don’t like pesto, I don’t like even the smell of it!”* and Megan had a completely opposite opinion *“I think this could be nice!”*

As a result, I harvested the basil myself (about 8 kg), took it home, made 4 kg of pesto and brought it back to the Green Café and kitchen the next day. Arriving at the SI with 4 big glass jars with pure pesto I told Ivoritha Nortje (i.e. the person responsible for the Green Café) that each 125g were sold at almost R40.00 in supermarket retailers. She immediately smiled and divided the jars into smaller glass jars and put it on the shelves to be sold. I left one of the 1kg jars in the kitchen and told the cooks that it could be an easy option for a pasta sauce. Finally, I brought two slices of toast with pesto on top and offered Bryce Anderson a taste. With a smile on his face he said *“This is fantastic.”*

These feedback loops that I performed are a key component of a complex system (Cilliers, 1998; van Mil et al., 2014).

#### **4.1.2 Step 2A: To understand the perspectives of SI staff about the role of food at this institution**

Before diving into quantitative analysis, semi-structured interviews were used to capture the perspectives from a few key personalities at the SI. Table 8 shows the list of interviewees:

| <b>Date</b> | <b>Interviewee<br/>(Person interviewed)</b> | <b>Interviewee role at SI</b>            | <b>Duration<br/>Interviewee<br/>employed at Si</b> | <b>Topic of<br/>discussion</b> | <b>Type of<br/>interview</b> | <b>Duration of<br/>interview</b> |
|-------------|---|--|--|--------------------------------|------------------------------|----------------------------------|
| 21.02.2014  | Bryce Anderson                              | Leader from Gardens n<br>Grounds project | 10 years   | Food Systems<br>at the S.I.    | Recorded                     | 45 min                           |
| 11.02.2014  | Denise Curi                                 | Volunteer from<br>Schumacher College     | 1 month  | Food Systems<br>at the S.I.    | Recorded                     | 45 min                           |
| 11.03.2014  | Louise<br>Bezuindehout                      | Former Head of Finance                   | 4,5 years  | Food Systems<br>at the S.I.    | Recorded                     | 20 min                           |
| 25.02.2014  | Tania Klink                                 | Events Manager                           | 5 years  | Food Systems<br>at the S.I.    | Recorded                     | 20 min                           |
| 19.02.2014  | Tracy Ward                                  | Leader of the Youth<br>Aftercare Project | 7 years  | Food Systems<br>at the S.I.    | Recorded                     | 45 min                           |
| 28.08.2015  | Bradley Bergh                               | Head of Finance 2015                     | 6 months   | Food Systems<br>at the S.I.    | Recorded                     | 40 min                           |

Table 8: The list of semi-structured interviews performed for this research

Although the number of interviews might seem short, the focus was not to gather conclusions about the food system at the SI. Rather, they were intended as way to start understanding the food system itself through a few key perspectives:

- The former Head of Finance (Louise Bezuindehout) was the person on top of “the numbers” overseeing the flow of resources (money) in and out of the SI, including money spent to buy food.
- Bryce Anderson, the leader of the Gardens and Grounds project and one of the oldest employees at the SI, able to bring a historical perspective about food over the last 10 years.
- Tracy Ward, the leader of the youth aftercare program, one of the main clients of the kitchen at the guest house.
- Tania Klink, as Events Manager she manages many different kinds of events at the SI (i.e. groups visiting, courses offered by other partnership organisations) including catering for food (i.e. she is also a client of the main kitchen at the SI).
- Denise Curi, a volunteer from Schumacher College in England who was working in the kitchen at the guest house, and able to bring a comparative perspective about her first impressions of the food system at the SI.

These recorded interviews will be complemented by notes and observations described in Step 1B.

*Key comments from the interviews*

From historical perspective, the connection between the main garden and the people from Lynedoch (i.e. either villagers or people from the SI) has somehow been lost. The participation in daily activities such as planting or even harvesting seems to have been abandoned, except by two members of the crèche.

- “My initial intention was to create spaces for people to grow food. [...] it’s 3 x 3, 9 square meters, that’s a plot, you can have that. And initially people were very interested and keen [...] and of course very quickly, they discovered it’s too difficult.
- You got to look after the plants on a daily basis actually [...] they just couldn’t continue with that and that’s still the case today.” – Bryce Anderson.
- “[...] they all have tried to garden you know: Naledi, Ros, even Mark and so on. So basically that intention failed [...] because people couldn’t continue, they didn’t have an understanding about what gardening is about. [...] people don’t know about the cycles.” – Bryce Anderson.
- “[...] first of all there is no connection between the villagers and the garden. There was [...] no one now apart from Christine and Kerneels has a parcel in the garden. In terms of the SI [...] what she does (i.e. Chantelle) is that she sees the garden as a place where the kids can develop.[...] Chantelle is doing very well in maintaining that interest. Other one is Christelle from the Baby Center [...] that for me is a very positive use of the garden.” – Bryce Anderson.

The idea of having the garden as a place for people to participate was then abandoned, but quickly moved towards the opportunity of providing food (i.e. fresh veggies) for the main kitchen. However this seems to be another idea moving towards the same destiny.

- “[...] that was overtaken almost immediately by wait a minute, wait a minute, there’s students coming through here, there’s a kitchen here and let’s go for the kitchen. I moved into that very easily. [...] and that’s what I am trying to do with diminishing resources because at a point 2 years maybe 3 years ago there was a budget for the garden. Finished. There’s no more money.” – Bryce Anderson.

The connection to the main kitchen at the guest house seems to be fragile, when it



comes to planning what is grown and what is served.

- “it’s opportunistic to a degree. I never came to a point where the kitchen would come and say :’this is what we want.’ and then have a production program for that. [...] What I do is to sow and plant what I know can grow at that time of the year.[...] I actually would go the other way. This is what I am planting, this is what I am harvesting. I actually did that, at the blog. And then you can see what is coming.” – Bryce Anderson.

These broken links are in fact, according to Tracy Ward, the result of broken relationships. The people involved now feel that “food” is a delicate subject at the SI.

- “At the moment I see it as a frustration, as a hot point. But I also think it is on the brink of change and that’s quite exciting. Things in a brink of change do boil over sometimes. [...] to me I think the large thing why food is being difficult is because the relationships are broken.[...]” – Tracy Ward.

As a volunteer coming from Schumacher College and working at the SI for 30 days since she arrived, Denise Curi have had a very different perspective at the SI: “I was surprised because I am coming from Schumacher College and there food is a central, fundamental issue. Here it is not the case.” – Denise Curi.

The interest in food, although delicate, is apparently growing.

- “[...] the role of food is becoming more important for us. I think the perception was more like practical. We had to feed the kids. And we had to feed the kids according to the social development guidelines and that is very important. [...] there is a nice story around feeding the students with vegetarian food from here but the more we sort of looked at it or, I saw like how much of the food really comes from SPAR and how little of the food is coming though here.[...] 4 years ago the Green Road didn’t exist [...] we are having a lot more contact with Janet. It is definitely increasing and so it is good.” – Louise Bezuindehout.
- “I think that from where we started food was always made as the important piece because that connects us more with the children, so it was important to have a balanced meal. [...] before we put together the organic stuff in place, the staff members that had the power over the food didn’t really connect to it as well. I think that Mathilda and Jess came along and also Gareth get involved

and Candice got more involved so now it is the best that we've been since we started [...] we never had control over it (i.e. the buying of food) and now it is more controlled...I guess. Cause we are checking now what was bought. And your initiative with the cookbook is making it more stronger, it is making it more real to people." – Tania Klink.

Most of these semi-structured interviews indicate a consensus that food at the SI does not have a central role (Anderson, 2014; Curi, 2014; Bezuidenhout, 2014, Ward, 2014). For Tania, however, food is at its best moment at the SI (Klink, 2014).

The interest seems to be growing (Klink, 2014; Bezuidenhout, 2014; Ward, 2014) although it is frustrating at this moment (Ward, 2014).

Louise Bezuidenhout felt hopeless about the effects of the cooking sessions on the future of the food system at the SI:

"If you ask me now if I could bet my money about how many sessions we'll cook after your sessions are done. If I could bet my money, in between zero and two times [...] cause someone must take responsibility for it. [...] but we'll see maybe there's a miracle." – Louise Bezuidenhout.

#### **4.1.3 Step 3A: To investigate all the food items bought at the SI during the period of March 2013 to May 2013 and the same period in 2014, trying to understand any trends or difference, and the possible influence of the "invitation" and/or cooking sessions**

According to a the report entitled *Global Powers of Retailing 2014* (Deloitte, 2014), the biggest retailer present in South Africa is Shoprite Holdings followed by Steinhoff International Holdings Ltd. (non-food based retailer), Pick 'n Pay, SPAR Group and Woolworths Holdings Limited. Shoprite, Pick n' Pay, SPAR and Woolworths are supermarket chains that sell food items. Another giant retailer present in South Africa is Massmart (Massmart, 2015), which owns local supermarket brands such as Makro and Game.

A very detailed quantitative analysis (Balnaves and Caputi, 2001) with a focus on univariate statistics (Muijs, 2004) showed that the vast majority of food purchases during March 2013 (63.18%), April 2013 (81.55%) and May 2013 (86.44%) came

from various large supermarket chains, thus supporting the consolidation of the sector where large supermarket chains take control over the food system (Reardon et al, 2003; Patel, 2012). In comparison, these numbers decreased during March 2014 (60.79 %), April 2014 (60.20%) and May 2014 (54.75%), which was the same time the cooking sessions described in Step 3B were held. This analysis from 2013 confirms the results of most of the interviews performed in 2A, where the attention of food is not a priority at the SI (Anderson, 2014; Curi, 2014; Bezuindehout, 2014, Ward, 2014). Table 9 shows a summary of the findings.

It is also very important for the reader to understand that the food receipts for 2014 do not include the purchases for the cooking sessions, since a separate account was opened specifically for that purpose. While cooking in the kitchen, however, action sometimes was too fast to trace, so food items from one account could have been used in someone else's recipe.

The limitations of this analysis, however, are linked to the fact that only three categories were compared: big retailers, the Green Road cooperative, and Lynedoch gardens, with the focus mainly on the first category. The second category was the closest cooperative of small organic farmers (i.e. Green Road) and the last category was the closest source of food (i.e. Lynedoch gardens a.k.a. Gardens n Grounds).

Other kinds of suppliers were ignored (although listed) for these calculations. This is because their production methods (i.e. organic, non-organic, gmo, non-gmo) are not easy to identify through the supermarket receipts, and the origins of these ingredients could not be identified either.

A new analysis (2015) could be performed in order to better clarify any trend. The absence of this analysis (2015) is a limitation of this thesis. The quantitative analysis was very time consuming, since every single item from the supermarket receipts had to be recorded in an electronic spreadsheet and then analysed. To cover the 6 months of supermarket receipts, an assistant was hired to help with recording 5 of them.

| Quantitative analysis - Food purchasing - Sustainability Institute |  |                   |            |
|--|--|-------------------|------------|
|  | BIG RETAILERS (Pick n Pay, Makro, Checkers, Shoprite, Spar, Woolworths, Bidvest) |                   |            |
|  |  | Gardens n Grounds | Green Road |
| Mar-13   | 63,18%   | 9,26%             | 0,00%      |
| Apr-13   | 81,55%   | 4,56%             | 0,00%      |
| May-13   | 86,44%   | 3,63%             | 0,00%      |
| Mar-14   | 60,79%   | 8,68%             | 5,53%      |
| Apr-14   | 60,20%   | 3,48%             | 4,98%      |
| May-14   | 54,75%   | 3,35%             | 14,53%     |

Table 9: The summary of the quantitative analysis of food purchasing at the SI

Tables 10, 11, 12, 13, 14 and 15 show a detailed summary of the purchases from each one of the months used for this research,

|       |           | FOOD PURCHASING AT THE SI - MARCH 2013 |       |         |           |        |
|-------|-----------|--|-------|---------|-----------|--------|
| ZAR   | Mar-13    |  | items | % items | ZAR       | % ZAR  |
| ITENS | 36 450,74 | PICK N'PAY                             | 235   | 55,82%  | 14 108,05 | 38,70% |
|       | 421       | GARDENS N' GROUNDS                     | 39    | 9,26%   | 1 910,00  | 5,24%  |
|       |           | Stellenbosch Cash n' Carry             | 32    | 7,60%   | 2 897,40  | 7,95%  |
|       |           | Shoprite                               | 29    | 6,89%   | 1 203,30  | 3,30%  |
|       |           | Food Lovers Market                     | 19    | 4,51%   | 1 027,30  | 2,82%  |
|       |           | Timberlea Farming Trust                | 12    | 2,85%   | 1 732,86  | 4,75%  |
|       |           | JWC Fruits and Veggies                 | 12    | 2,85%   | 810,00    | 2,22%  |
|       |           | Fairfield Meat Centre                  | 8     | 1,90%   | 542,70    | 1,49%  |
|       |           | Value Baking Supermarket Strand        | 6     | 1,43%   | 249,35    | 0,68%  |
|       |           | Legado Coffee                          | 5     | 1,19%   | 2 519,96  | 6,91%  |
|       |           | Juice Direct Winelands                 | 5     | 1,19%   | 1 324,25  | 3,63%  |
|       |           | Eureka Meulens                         | 4     | 0,95%   | 1 199,78  | 3,29%  |
|       |           | ACM Robb                               | 2     | 0,48%   | 371,80    | 1,02%  |
|       |           | Checkers                               | 2     | 0,48%   | 101,91    | 0,28%  |
|       |           | Nowo Organics                          | 2     | 0,48%   | 160,00    | 0,44%  |
|       |           | Chill Direct                           | 1     | 0,24%   | 648,56    | 1,78%  |
|       |           | De Vleismeul                           | 1     | 0,24%   | 351,48    | 0,96%  |
|       |           | Espresso Blend + Mexico Organic        | 1     | 0,24%   | 635,00    | 1,74%  |
|       |           | Marcel's Frozen Yogurt                 | 1     | 0,24%   | 2 201,10  | 6,04%  |
|       |           | Olive Grove                            | 1     | 0,24%   | 985,76    | 2,70%  |
|       |           | Pru's                                  | 1     | 0,24%   | 180,00    | 0,49%  |
|       |           | Rootstock Vegi                         | 1     | 0,24%   | 340,29    | 0,93%  |
|       |           | WP Vleis Groothandelaars (PTY) Ltd     | 1     | 0,24%   | 464,89    | 1,28%  |
|       |           | Z.                                     | 1     | 0,24%   | 485,00    | 1,33%  |
|       |           |  | 421   | 100,00% | 36 450,74 | 100%   |

Table 10: Detailed food purchasing at the SI - March 2013

|       |           | FOOD PURCHASING AT THE SI - APRIL 2013                              |            |                |                  |             |
|-------|-----------|---|------------|----------------|------------------|-------------|
| ZAR   | Apr-13    |   | items      | % items        | ZAR              | % ZAR       |
| ITENS | 44 594,91 | Pick n Pay  | 239        | 47,42%         | 13 894,06        | 31,16%      |
|       | 504       | Makro   | 96         | 19,05%         | 7 886,77         | 17,69%      |
|       |           | Shoprite  | 34         | 6,75%          | 1 907,57         | 4,28%       |
|       |           | Gardens and Grounds   | 23         | 4,56%          | 1 718,00         | 3,85%       |
|       |           | Spar  | 19         | 3,77%          | 4 050,74         | 9,08%       |
|       |           | Checkers  | 16         | 3,17%          | 1 082,72         | 2,43%       |
|       |           | JWC Fruit and Veggies   | 15         | 2,98%          | 1 648,00         | 3,70%       |
|       |           | Timberlea Farming Trust t/a Bluejay                                 | 11         | 2,18%          | 1 222,46         | 2,74%       |
|       |           | Game  | 7          | 1,39%          | 288,78           | 0,65%       |
|       |           | Fruit and Veg City  | 5          | 0,99%          | 192,90           | 0,43%       |
|       |           | Eureka meulens  | 4          | 0,79%          | 919,91           | 2,06%       |
|       |           | Karin Roxburgh  | 4          | 0,79%          | 1 119,40         | 2,51%       |
|       |           | Legado Coffee   | 4          | 0,79%          | 2 179,95         | 4,89%       |
|       |           | Zetlerbosch farm stall  | 4          | 0,79%          | 127,70           | 0,29%       |
|       |           | Food Lover's market   | 3          | 0,60%          | 375,90           | 0,84%       |
|       |           | Homegrown free range eggs   | 3          | 0,60%          | 477,00           | 1,07%       |
|       |           | Juice direct winelands  | 3          | 0,60%          | 927,30           | 2,08%       |
|       |           | Mini-Mark   | 3          | 0,60%          | 38,40            | 0,09%       |
|       |           | Nowo Organics   | 2          | 0,40%          | 750,00           | 1,68%       |
|       |           | Papa's confectionary  | 2          | 0,40%          | 940,00           | 2,11%       |
|       |           | Rootstock Vegi Crips  | 2          | 0,40%          | 814,03           | 1,83%       |
|       |           | ASNAPP (Agribusiness innSustainable Natural African Plant products) | 1          | 0,20%          | 120,00           | 0,27%       |
|       |           | Bergstedt Fruit and veg   | 1          | 0,20%          | 26,00            | 0,06%       |
|       |           | Marcel's Frozen yogurt  | 1          | 0,20%          | 866,40           | 1,94%       |
|       |           | Poormans' Friends Halaal meat emporium                              | 1          | 0,20%          | 590,00           | 1,32%       |
|       |           | Ticklemouse Country Fare  | 1          | 0,20%          | 430,92           | 0,97%       |
|       |           |   | <b>504</b> | <b>100,00%</b> | <b>44 594,91</b> | <b>100%</b> |

Table 11: Detailed food purchasing at the SI - April 2013

|       |           | FOOD PURCHASING AT THE SI - MAY 2013 |            |                |                  |                |
|-------|-----------|--------------------------------------|------------|----------------|------------------|----------------|
| ZAR   | May-13    |                                      | items      | % items        | ZAR              | % ZAR          |
| ITENS | 29 590,35 | PICK N'PAY                           | 160        | 38,74%         | 8 282,89         | 27,99%         |
|       | 413       | MAKRO                                | 112        | 27,12%         | 10 666,98        | 36,05%         |
|       |           | CHECKERS                             | 52         | 12,59%         | 2 975,76         | 10,06%         |
|       |           | SHOPRITE                             | 33         | 7,99%          | 1 252,78         | 4,23%          |
|       |           | JWC Fruit and Veg                    | 18         | 4,36%          | 1 050,00         | 3,55%          |
|       |           | Garden and grounds                   | 15         | 3,63%          | 740,00           | 2,50%          |
|       |           | Fruit and veg City                   | 5          | 1,21%          | 312,89           | 1,06%          |
|       |           | Timberlea Farming Trust t/a Bluejay  | 4          | 0,97%          | 440,00           | 1,49%          |
|       |           | Zelterbosch Farm stall               | 4          | 0,97%          | 87,34            | 0,30%          |
|       |           | Ticklemouse Country Fare             | 2          | 0,48%          | 812,59           | 2,75%          |
|       |           | Juice Direct Winelands               | 2          | 0,48%          | 727,20           | 2,46%          |
|       |           | Home Grown free Range eggs           | 2          | 0,48%          | 106,00           | 0,36%          |
|       |           | Legado Coffee                        | 1          | 0,24%          | 1 025,01         | 3,46%          |
|       |           | Marie's craftshop                    | 1          | 0,24%          | 210,00           | 0,71%          |
|       |           | Mexicorn                             | 1          | 0,24%          | 300,96           | 1,02%          |
|       |           | New Forest Meat Hyper                | 1          | 0,24%          | 599,95           | 2,03%          |
|       |           |                                      | <b>413</b> | <b>100,00%</b> | <b>29 590,35</b> | <b>100,00%</b> |

Table 12: Detailed food purchasing at the SI - May 2013

|       |           | <b>FOOD PURCHASING AT THE SI - MARCH 2014</b> |       |         |           |        |
|-------|-----------|---|-------|---------|-----------|--------|
| ZAR   | Mar-14    |   | items | % items | ZAR       | % ZAR  |
| ITENS | 49 748,06 |   |       |         |           |        |
|       | 380       |   |       |         |           |        |
|       |           | Makro   | 93    | 24,47%  | 12 378,70 | 24,88% |
|       |           | Pick n pay                                    | 57    | 15,00%  | 4 370,82  | 8,79%  |
|       |           | JW Fruit and Veg                              | 37    | 9,74%   | 2 350,00  | 4,72%  |
|       |           | <b>Gardens and grounds</b>                    | 33    | 8,68%   | 1 971,60  | 3,96%  |
|       |           | Checkers                                      | 26    | 6,84%   | 2 713,31  | 5,45%  |
|       |           | Shoprite                                      | 26    | 6,84%   | 1 198,41  | 2,41%  |
|       |           | Green Road                                    | 21    | 5,53%   | 2 210,95  | 4,44%  |
|       |           | Kwikspar                                      | 17    | 4,47%   | 1 853,62  | 3,73%  |
|       |           | Woolworths                                    | 10    | 2,63%   | 3 140,98  | 6,31%  |
|       |           | Zetlerbosch Farm stall                        | 8     | 2,11%   | 408,65    | 0,82%  |
|       |           | Homegrown Free range Eggs                     | 6     | 1,58%   | 754,00    | 1,52%  |
|       |           | Legado  | 6     | 1,58%   | 5 035,04  | 10,12% |
|       |           | New Forest Meat Hyper                         | 6     | 1,58%   | 2 543,37  | 5,11%  |
|       |           | Juice Direct Winelands                        | 4     | 1,05%   | 1 808,45  | 3,64%  |
|       |           | Rootstock Vegi Crisps                         | 4     | 1,05%   | 1 121,85  | 2,26%  |
|       |           | Stellenbosch waldorf school                   | 4     | 1,05%   | 367,66    | 0,74%  |
|       |           | Nowo Organics                                 | 3     | 0,79%   | 740,00    | 1,49%  |
|       |           | Eric Swartz                                   | 2     | 0,53%   | 130,00    | 0,26%  |
|       |           | Game  | 2     | 0,53%   | 100,40    | 0,20%  |
|       |           | Pacific Foods Eesteriver                      | 2     | 0,53%   | 350,00    | 0,70%  |
|       |           | Ticklemouse Country Fare                      | 2     | 0,53%   | 594,40    | 1,19%  |
|       |           | Timberlea Farming Trust                       | 2     | 0,53%   | 440,00    | 0,88%  |
|       |           | Britos Meat Centre                            | 1     | 0,26%   | 192,00    | 0,39%  |
|       |           | Eureka Meulens                                | 1     | 0,26%   | 137,23    | 0,28%  |
|       |           | Mexicorn                                      | 1     | 0,26%   | 752,40    | 1,51%  |
|       |           | Mini-Mark                                     | 1     | 0,26%   | 125,70    | 0,25%  |
|       |           | PA Germishuys                                 | 1     | 0,26%   | 140,00    | 0,28%  |
|       |           | Papas Confectionary                           | 1     | 0,26%   | 840,00    | 1,69%  |
|       |           | Spier Wine Estate                             | 1     | 0,26%   | 276,00    | 0,55%  |
|       |           | The Olive Grove                               | 1     | 0,26%   | 562,52    | 1,13%  |
|       |           | Youth Christine                               | 1     | 0,26%   | 140,00    | 0,28%  |
|       |           |   | 380   | 100,00% | 49 748,06 | 100%   |

Table 13: Detailed food purchasing at the SI - March 2014

|       |           | <b>FOOD PURCHASING AT THE SI - APRIL 2014</b> |       |         |           |        |
|-------|-----------|---|-------|---------|-----------|--------|
| ZAR   | Apr-14    |   | items | % items | ZAR       | % ZAR  |
| ITENS | 26 196,27 |   |       |         |           |        |
|       | 201       |   |       |         |           |        |
|       |           | Bidvest                                       | 59    | 29,35%  | 13 100,57 | 50,01% |
|       |           | Pick n Pay                                    | 39    | 19,40%  | 1 512,56  | 5,77%  |
|       |           | JWC Fruit and Veg                             | 29    | 14,43%  | 2 190,55  | 8,36%  |
|       |           | Superspar                                     | 16    | 7,96%   | 858,75    | 3,28%  |
|       |           | Garden and Grounds                            | 7     | 3,48%   | 148,00    | 0,56%  |
|       |           | Green Road                                    | 10    | 4,98%   | 1 074,70  | 4,10%  |
|       |           | Pacific Dried Fruit                           | 7     | 3,48%   | 406,95    | 1,55%  |
|       |           | Homegrown Free Range Eggs                     | 6     | 2,99%   | 522,00    | 1,99%  |
|       |           | National Pride trading                        | 5     | 2,49%   | 130,02    | 0,50%  |
|       |           | New Forest Meat Hyper                         | 4     | 1,99%   | 235,76    | 0,90%  |
|       |           | Checkers                                      | 3     | 1,49%   | 1 588,88  | 6,07%  |
|       |           | Legado  | 3     | 1,49%   | 1 440,05  | 5,50%  |
|       |           | Shoprite                                      | 3     | 1,49%   | 56,97     | 0,22%  |
|       |           | Fruit and veg city Food lovers market         | 2     | 1,00%   | 126,99    | 0,48%  |
|       |           | Pacific Foods                                 | 2     | 1,00%   | 106,00    | 0,40%  |
|       |           | Ticklemouse                                   | 2     | 1,00%   | 923,11    | 3,52%  |
|       |           | Juice Direct                                  | 1     | 0,50%   | 215,55    | 0,82%  |
|       |           | KFC   | 1     | 0,50%   | 39,70     | 0,15%  |
|       |           | Makro   | 1     | 0,50%   | 1 184,00  | 4,52%  |
|       |           | Rootstock Vegi Crisps                         | 1     | 0,50%   | 335,16    | 1,28%  |
|       |           |   | 201   | 100,00% | 26 196,27 | 100%   |

Table 14 - Detailed food purchasing at the SI - April 2014

| ZAR   | May-14    | FOOD PURCHASING AT THE SI - MAY 2014 |  | items | % items | ZAR       | % ZAR  |
|-------|-----------|--------------------------------------|--|-------|---------|-----------|--------|
| ITENS | 24 123,94 | Bidvest                              |  | 42    | 23,46%  | 8 499,91  | 35,23% |
|       | 179       | Shoprite                             |  | 31    | 17,32%  | 2 212,31  | 9,17%  |
|       |           | The Green Road                       |  | 26    | 14,53%  | 5 175,16  | 21,45% |
|       |           | Pick n Pay                           |  | 25    | 13,97%  | 1 374,45  | 5,70%  |
|       |           | Pacific foods                        |  | 15    | 8,38%   | 1 093,94  | 4,53%  |
|       |           | JWC Fruit and Veg                    |  | 13    | 7,26%   | 977,00    | 4,05%  |
|       |           | Garden and Grounds                   |  | 6     | 3,35%   | 152,00    | 0,63%  |
|       |           | Homegrown free range eggs            |  | 4     | 2,23%   | 348,00    | 1,44%  |
|       |           | New Forest Hyper Meat Mart           |  | 3     | 1,68%   | 177,65    | 0,74%  |
|       |           | Roostock Vegi Crisps                 |  | 3     | 1,68%   | 1 139,39  | 4,72%  |
|       |           | Legado                               |  | 2     | 1,12%   | 899,98    | 3,73%  |
|       |           | Mexicorn                             |  | 2     | 1,12%   | 451,44    | 1,87%  |
|       |           | Ticklemouse Country Fare             |  | 2     | 1,12%   | 596,22    | 2,47%  |
|       |           | Fruit and Veg City                   |  | 1     | 0,56%   | 29,99     | 0,12%  |
|       |           | Juice Direct                         |  | 1     | 0,56%   | 423,10    | 1,75%  |
|       |           | Juice Direct Winelands               |  | 1     | 0,56%   | 214,40    | 0,89%  |
|       |           | Kekkel En Kraai                      |  | 1     | 0,56%   | 169,00    | 0,70%  |
|       |           | Spier                                |  | 1     | 0,56%   | 190,00    | 0,79%  |
|       |           |                                      |  | 179   | 100,00% | 24 123,94 | 100%   |

Table 15 - Detailed food purchasing at the SI - May 2014

An analysis of average cost per item suggests that 2014 was more costly than 2013. This analysis is however very limited because the inflation rate (from 4,6% to 6,3% according to the trading website <http://www.tradingeconomics.com/south-africa/inflation-cpi>) was not taken into consideration, and the best comparison would be comparing cost per volume or weight. Regarding this limitation, it is shown here as mere illustration and will not impact the conclusions.

| <b>COST</b>     |                  |                  |                  |
|-----------------|------------------|------------------|------------------|
|                 | <b>Mar-13</b>    | <b>Apr-13</b>    | <b>May-13</b>    |
| <b>Items</b>    | <b>421</b>       | <b>504</b>       | <b>413</b>       |
| <b>ZAR</b>      | <b>36 450,74</b> | <b>44 594,91</b> | <b>29 590,35</b> |
| <b>ZAR/ITEM</b> | <b>86,58</b>     | <b>88,48</b>     | <b>71,65</b>     |

|                 | <b>Mar-14</b>    | <b>Apr-14</b>    | <b>May-14</b>    |
|-----------------|------------------|------------------|------------------|
| <b>Items</b>    | <b>380</b>       | <b>201</b>       | <b>179</b>       |
| <b>ZAR</b>      | <b>49 748,06</b> | <b>26 196,27</b> | <b>24 123,94</b> |
| <b>ZAR/ITEM</b> | <b>130,92</b>    | <b>130,33</b>    | <b>134,77</b>    |

Table 16: Average cost per item in 2013 and 2014

Together with the quantitative research, a points system was proposed in order to direct the food procurement at the SI towards local organic farmers and producers. This system would add 1 point to every item bought from a large supermarket chain, 2 points when the item is bought from a cooperative of small, local and organic producers, and finally, 3 points to the food coming directly from the Lynedoch Gardens. This system is not perfect, but could help to compare recipes and dishes created at the SI and also help the customers to understand where their food comes from. An example of the use of this system is shown in a few recipes in Step 3B.

The points system used during the cooking sessions was created to favour locally produced items and/or small producers, which carried the most points. In large supermarket chains in general it is very difficult to obtain accurate information about the origin of each product, and this is not something unique to South Africa, although there is a growing interest in the subject (McLaughlin, 2014). In the case of Brazil, traceability systems are being adopted by multinational retail chains mainly for health reasons, related to the excessive consumption of pesticide residues still present on the products offered to consumers (Buso, 2015). In these cases, technology companies such as “PariPassu” (Paripassu Aplicativos, 2014) are contracted to be able to tell, with pinpoint accuracy, the origin of a particular food that has been analysed in laboratory tests to show high levels of



pesticides. These tracking systems make it possible to know the origin of the food (where it was planted and harvested), the exact route that the food took, plus information on the entire chain from its origin to the supermarket (Buso, 2015). This technology has not yet been adopted by major retailers present in South Africa, such as Woolworths (Woolworths, 2014) but according to one of its sustainability experts Tom McLaughlin (McLaughlin, 2014) the interest in and need for this technology is increasing.

#### **4.1.4 Step 4A: To analyse the different educational modules offered by the SI in order to understand how the theme of food is addressed in the classroom**

From the 24 different modules offered in 2014 by the SI, three of them showed a clear connection to food and/or agriculture in their names and definitions:

- Food Security & Globalised Agriculture
- Regional Food Systems
- Systems & Technologies for Sustainable Agriculture

Two other modules showed a connection with food in their descriptions:

- Ecological Design for Community Building
- Sustainable Cities

The modules "Ecological Design for Community Building" and "Sustainable Cities" do have a clear connection to food/agriculture in their content description. Therefore 5 in 24 modules offered at the SI (or 20,8%) deal with food and or agriculture. This information can be found in the Prospectus 2014 that is a description of all the modules and scheduled dates for the 2014 year (Appendix 1). The content of four of these modules clearly addresses food and agriculture in a more sustainable way, but one of them, "Sustainable Cities" is not that clear in its definition:

- *Ecological Design for Community Building*

"Sustainable food and water supplies for local communities, towns and cities"

- *Food Security and Globalised Agriculture*

“Responses to Globalised Food Systems – effect on the poor and marginalised, including groups responding (Via Campesino, Slow Food, Fair Trade, Landless People’s Movements).”

- *Regional Food Systems*

“Much of the regional food system discourse has emerged in the Global North and concepts are often uncritically transferred to, and at times imposed on, the Global South. This module challenges this approach by exploring approaches more appropriate to Southern responses to these global food system trends.”

- *Systems & Technologies for Sustainable Agriculture I*

“Participants will understand the principles of these alternative farming systems and be able to apply them to different crop and animal production systems through case study teaching. Students will learn about crop and animal production using the inputs of soil, water, energy, labour and capital (assets) in a sustainable way that includes local environmental conditions, economic considerations and social networks.”

- *Sustainable Cities*

The challenge of unsustainable urban systems for food supplies, waste, energy, water and CO<sub>2</sub> emissions.

Therefore, supposedly, students participating in these modules would be introduced to food and food production subjects that reflected a sustainable development approach.

#### **4.1.5 Step 1B: To spend at least twenty days immersed at the SI to observe the behaviour of students, staff and people living in Lynedoch, to try to understand their relationship with food**

During these 20 days I sat and observed (Salkind, 2010) the behavior of people in relationship to food. The Green Café and the gardens were the main observation areas, because the first is a very busy area where students, staff and visitors gather to spend some time during breaks, and the second is the nearest area

where people who live in Lynedoch, as well as students and staff of the SI, can interact with food and food production. During the mornings I would stop by the Green Café and write parts of this thesis, and in the late morning move to a bench in the gardens and sit there until the beginning of the afternoon (about 14h00). During February 2015, this period of observation overlapped with cooking with the staff in the kitchen at the guest house (Table 7).

The reasons for this timetable were as follows:

- From 08h30 to 10h00, the students are required to help in the gardens under the guidance of Bryce Anderson. The students clean beds, plant seedlings or harvest vegetables. Therefore this was a key time to observe people connecting to food and food production.
- From 10h30 to 13h00, any interaction with the vegetable gardens was not compulsory, so I was interested in observing this period.

No one – besides the staff dedicated to this activity - was seen participating in food production (i.e. harvest, planting, composting) outside of the compulsory community service period. According to Bryce Anderson (2014) the garden and the village are completely disconnected; people sometimes show interest, but lose momentum after some time, as shown previously in Step 2A interviews. It is important to note, however, that these observations took place in a time window where most of the staff are working, and don't have "extra time" to visit the gardens.

Another very important observation is that during these 20 days, no one from the kitchen staff was seen interacting with the garden, confirming the perspective expressed during the interview with Bryce Anderson (Anderson, 2014). This connection is potentially the most important since the gardens and the kitchen could work together to create more localized meals.

As Tracy Ward suggests, the food system at the SI is a reflection of relationships, and due to broken relationships, the food system is broken (Ward, 2014). Again, feedback loops (e.g. between kitchen and garden) from the Complex Systems approach (Cilliers, 1998) seem to be non-existent in this case.

Mathilda Davids manages the guest house and is responsible for all the meals prepared and served from the main kitchen on a daily basis (Figure 5). She participated during this period in a student work group (i.e. students from the PGD

programme must connect to the projects happening at the Sustainability Institute) and during her presentation, the aim of the Farm to Fork programme was to “provide a healthy way of living with our sustainable food projects. We supply food to our crèche and youth. These children come from surrounding farms, where balanced meals aren’t regularly available to them.” According to Davids, the Farm to Fork program is also a way of connecting the classroom and practice: “The SI gives the opportunities to our students with respective modules and learning the sustainable way of food security.” And the role of the garden should be enhanced “The G & G (i.e. Gardens n Grounds) still needs to be more productive for our other projects, so that we no longer have to outsource our vegetables. There is still many room for improvement.”

When it comes to productivity however, the diversity of crops at the gardens seem to be an issue, from time to time a large amount of certain types of ingredients suddenly comes to the kitchen without warning. Besides the example of the basil in Step 1A, another example could be observed, this time with tomatoes.

On 26<sup>th</sup> February 2014, three full crates of tomatoes (from Gardens n Grounds, altogether the amount was estimated in more than 30 kg) were sent into the kitchen, even though the kitchen staff were not sure how to use that amount. As said by Meagan Mavandal: “I think everyone will be eating a lot of tomatoes this week.” Unfortunately, a few days later on the 7<sup>th</sup> of March, a large amount of tomatoes (that I estimated to be more than 10 kg) could be observed in the compost pile and even inside the trash bin close to the kitchen.

On the same day, June Stone came to talk to me at the Green Café, and knowing that I was feeling a bit frustrated with food being thrown away, she said: “You are not the first one to try this, many others tried this before. Every year we come to this discussion around food, something happens and then it comes back to where we were before.” Those words reminded me immediately of the words said by Louise Bezuindehout (2014) about what would last after the cooking sessions were over.

The Green Café is a very interesting place to sit and watch because it is basically the first interaction that a visitor will have with the Sustainability Institute. People will come, ask for coffee and/or a snack, sit and relax. Most clients seem to be more interested in the ready-to-go products (e.g. cereal bars, pre-packed snacks) than in light meals prepared on demand.

Concern for sustainable development in food production could be observed very clearly in one specific client. Rosie Downey (who helped me with the spreadsheets for the food receipts) was also involved with a few projects at the SI, with a focus on international programmes. One morning in March 2014 she was visibly irritated. When I asked her what happened, she said: “*They served me an omelette made with regular eggs and I told them – how dare you to serve me eggs that are not free range?*” Her reaction was an expression full of disappointment. People assume that the meals served are aligned with the teaching and ethos of the SI.

#### **4.1.6 Step 2B: To host an invitation session involving all the SI staff, to share a meal together and introduce them to the PAR methodology that is at the heart of this thesis**

On 28<sup>th</sup> February of 2014 the staff at the SI were invited to participate in a lunch (Figure 4) where my family and I cooked the national Brazilian dish – Feijoada – for them, as described in Chapter 3. In order to invite people to cook for each other, my example could be the best way to lead them.

In order to introduce them to the meal, however, I explained the story of the dish itself that somehow connects Brazil and the African continent (Carneiro, 2005) and also asked a few questions about the origins of each of the ingredients.

Photos 1 and 2 helped to show how far rice travelled for us to eat this meal in South Africa, and raised questions around traceability of food from its origin.



Photo1: Rice origins



Photo 2: Rice origins uncertain

During the lunch, curious comments around the dish itself were heard: *“How do you eat this?”* said Tania Klink pointing to the Brazilian “farofa” that is made from manioc flour and usually is eaten with the rice and beans in many regions of Brazil.

To serve a dish that was foreign to all of the South African staff was also an interesting way of levelling the playing field. No one has ever had contact with that kind of Brazilian food before, and comments around the various tables showed how perspectives about the same “new” dish could be very different. *“I loved the pork meat but I don’t like beans at all!”* said Chantelle Scott, at the same time, Shaun Claaser said *“This is very good but I am still curious about the Brazilian braai (i.e. barbecue)”* These comments are evidence to something obvious: food that might be pleasant to one might not be to another.

The ambiance was light and full of joy. When asked about how these cooking sessions would affect the relationships among the staff, Louise Bezuindehout said: *“I think it affects it hugely. Just taking the time to just speak to people, not in a meeting it is just joking around the table [...] sharing tasks and then talking. [...] I connected to Litha and Katlee in a completely different way that I ever done so before you know it I would have connected to almost all of our staff in a different way.”*

#### **4.1.7 Step 3B: To adapt the Elos methodology to create a game where the SI staff would be invited to reflect about their food choices by cooking together and sharing meals - called the “cooking sessions”**

As shown at the end of Chapter 3 (Table 2), the Elos methodology (2014) was adapted to this work of PAR (Barbera, 2008) where the cooking sessions played the central role.

The cooking sessions involved 65% of the employees of the SI, in other words, 24 of the 37 staff members actively participated in the selection of recipes, the search for suppliers for their ingredients, the preparation of the dishes to be served, as well as the presentation of the food that catered for up to 64 people at a single lunch (during one specific session, the staff invited their families and friends from the village). In total, at least 207 meals were served over six thematic sessions, and which used at least 178 ingredients whose origin was divided primarily between large supermarket chains (64%) and the rest of the items coming from local producers, including Green Road and even the gardens of Lynedoch (36%)

(Appendix 5).

The full description of each cooking session is a key part of this research since it might suggest what and how the SI team would cook if there were no limits to budget and choice. Each recipe also shows the origins of the ingredients and the points awarded for each one of them as a practical example of using the point system described in Chapter 3. I personally followed the whole process that took place in the kitchen during these sessions in order to describe with precision the use of ingredients, and follow the dynamics among participants who provided notes and comments, which will be used throughout these descriptions.

These recipes demonstrated that the food choices made by the members of each team were an expression of their diverse cultures and life experiences. A very important fact however, is that it also shows what and how the SI staff would cook if there were no limits to budget and choices.

After the description of the cooking sessions, a comparison between the usual food purchasing at the SI (i.e. the quantitative analysis presented before) and the food purchasing during the cooking sessions is presented.

### ***Cooking session #1***

The first cooking session took place on 7 March 2014. A team consisting of Louise Bezuidenhout, Katlee Mabeba, Litha Magida and Anlo Lintvelt (who replaced Meagan Mavandal at the last moment) interpreted the theme "local" by looking for a recipe from someone from the Lynedoch community, and exploring suppliers located near the SI who worked with organic or biodynamic ingredients.

That morning you would have seen a nervous team that rarely participated in any activity in the kitchen as described by Katlee Mabeba. Being the first team to participate in a cooking session, uncertainty about the outcome generated an invisible pressure on participants who timidly tried to take their roles in simpler or more complex (Bezuidenhout, 2014) tasks. That day, it was not possible to use the kitchen at the guest house which was originally allocated to this task. The team however quickly regrouped and decided unanimously to use the kitchen at the home of Louise Bezuidenhout. This simple act made me recall the resilience mainly present in complex systems and the phenomenon of emergency (Cilliers, 1998).



Here is the recipe that was used by Team 5 (see Table 5), from one of the residents of Lynedoch - Tannie Colleen. The recipe selected and the origin of each ingredient is described below.

Tannie Colleen's Bobotie – “Local” Ingredients for 15 people:

1,5kg mince - (Green Road) – use lentils in case of a vegetarian recipe.  
(2 points)

6 slices of bread soaked in milk (Pick n Pay) (1 points)

450ml milk for the bread – (Green Road) (2 points)

6 medium onions - (Green Road) (2 points)

6 eggs (Green Road) (2 points)

150ml Fruity Sweet Chilli Sauce or Chutney or Apricot jam or a combination -  
(Green Road) (2 points)

90ml canola oil – (Pick n Pay) (1 points)

3 tbsp crushed ginger – (Pick n Pay) (1 points)

9 tbsp garlic – (Pick n Pay) (1 points)

30ml fennel – (Gardens n Grounds Lynedoch) (3 points)

30ml turmeric – (Pick n Pay) (1 points)

30ml cumin – (Pick n Pay) (1 points)

35ml curry powder – (Woolworths) (1 points)

30ml salt – (Woolworths) (1 points)

7.5ml pepper – (Woolworths) (1 points)

90ml lemon juice – (Woolworths) (1 points)

150mg almond slivers – (Woolworths) (1 points)

18 lemon leaves – (Gardens n Grounds Lynedoch) (3 points)

Half a handful of raisins – (Green Road) (2 points)

3 sticks of cinnamon – (Pick n Pay) (1 points)

Pre-heat the oven to 180 degrees Celsius, heat oil in a large frying pan. Add the spices (be careful not to burn the spices), add the onions and fry until transparent, mix the mince and the eggs and fry with the onions and sticks of cinnamon. Add the lemon juice, raisins, sweet chilli sauce and bread, and braise. Transfer mixture to a baking dish. Sprinkle the almonds over. Make holes in the mixture and insert rolled up lemon leaves (original recipe uses bay leaves). Make sure to take out the sticks of cinnamon before serving.

#### Bobotie's custard

9 eggs – (Green Road) (3 points)

3 cup of milk – (Green Road) (2 points)

3 cup of cream – (Pick n Pay) (1 points)

Lightly beat the ingredients together in a bowl.

#### Rice

1,5kg organic rice – (Green Road) (2 points)

15ml borrie (turmeric + corn flour mixed) – (Pick n Pay) (1 points)

Cook the rice with abundant water, which in general for organic rice means 1 part of rice for 2 parts of water. After the rice is cooked, rinse water if necessary and season with borrie.

The bobotie is an interesting example of the richness and diversity of cuisine in South Africa. The emergence of colonial world cuisine arose from the encounter between different cultures and ingredients. In many parts of the world, such as British India, Dutch Indonesia and French Algeria, fusion between galleys gave birth to hybrid dishes such as Scottish kedgeriee (salmon and rice), served with ratatouille and Algerian couscous, and in South Africa, the example comes from Cape bobotie (McCann, 2009).

At 13:00 pm later that day, employees of the SI began to arrive. The team was proud of the result and the participants really enjoyed the bobotie. A vegetarian version was also prepared to meet the requirements of those who did not eat mincemeat. Interestingly, at this very first cooking session, a competitive spirit among the participants was fired and the game was on. There, comments among teams showed what was to come "[...] when it is our time get ready to join us for two days. We'll serve up a feast! " said Rene Human. In total, 18 people ate the bobotie at this first session.

*"[...] I never thought it could work. The bobotie is very good actually. It is almost unbelievable!" - Katlee Mabeba*

*"[...] I was thinking about "local" and then I remembered an amazing bobotie that Tannie Colleen prepared a few weeks ago so we decided to use a local recipe. A recipe from Lynedoch!" - Louise Bezuidenhout*

### **Cooking session #2**

The second cooking session was held on March 14, 2014 by a team that comprised of: Shaun Claaser, Ivoritha Nortje, June Stone and Thembisile Memela. This team also used the theme of "local". This time, influenced by one of the members of the group from a Xhosa background, the group decided to prepare a meal using recipes from the Xhosa people, adding an ingredient common to the South African table, the "boerewors" sausage, to cater to the taste of the "carnivores". *"[...] not easy to cook for so many people. Let's see what happens. And you still owe us a Brazilian braai" – Shaun Claaser.*

The Xhosa ethnic group, numerous in the Western Cape, Western Province in South Africa, has a rich culture. The language, isiXhosa, is characterized by crackles made with the tongue during the pronunciation mainly for the letters "c", "x" and "q". Nelson Rolihlahla Mandela, from the Mandela clan (Maharaj, Kathrada and Nicol, 2014) is arguably the most illustrious Xhosa person in the world. He was renowned as a figurehead for the movement that ended the shameful system of racial segregation that prevailed for decades in the country, known as Apartheid.

Besides the food offered by this group to the guests, they also had face painting and ate with their hands, as mandated by the Xhosa tradition as said Thembi Memela. That surprised some of the group less accustomed to such habits and somewhat comforted others who had used their hands to eat in other cultures of

the world "[...] interesting [thing about] eating with your hands is to realise temperature, texture, consistency of food before it arrives at the mouth - as noted by Luke Metelerkamp. The dishes in cooking session #2 were chakalaka with pap and morogo, accompanied by boerewors. "[...] *this is Xhosa food. Chakalaka.*" – Thembi Memela. The morogo, pronounced "moroho" is a generic term to define "wild leaves", now replaced with beet greens or beans, among other options (Sitole, 1999). This is an important ingredient in the traditional African diet, which is rich in starch. In some regions, people tend not to use ingredients like these, believing they are somehow inferior to the Western diet. Some of the traditional names of these plants are lerotho (*Cleome gynandra*) and dinawa (*Vigna unguiculata*) (van der Walt, Loots, Ibrahim and Bezuidenhout, 2009).

For the preparation of our recipe however, a type of Swiss chard, another plant species with dark green leaves, was found more easy to use. Although the ingredient has been modified, the form of preparation remains the same and the name of the dish does too - morogo.

#### Chakalaka with pap and morogo with boerewors on the side – "Local"

Ingredients list for 20 people:

##### Pap

2.5 kg maize meal - (Pick n Pay) (1 point)

Dilute 2.5 kg of maize meal in water, then add to a pan of boiling water, and mix to avoid lumps.

##### Chakalaka

3 colour bell peppers - (Woolworths) (1 point)

1 bunch carrots - (Green Road) (2 points)

4 onions - (Green Road) (2 points)

1 can of tomato puree - (Pick n Pay) (1 point)

1 tea spoon of Perivale - (Pick n Pay) (1 point)

1 tea spoon of curry - (Pick n Pay) (1 point)

3 table spoons vegetable oil - (Pick n Pay) (1 point)

3 canned beans - (Woolworths) (1 point)

Add to a saucepan the oil, chopped onions, chopped bell peppers, tomato puree, curry, chopped carrots. Add the peri peri pepper, let it cook for a few minutes, add the canned beans, and mix.

### Morogo

3 table spoons vegetable oil - (Pick n Pay) (1 point)

1kg potatoes - (Green Road) (2 points)

12 bunches spinach - (Green Road) (2 points)

400g cheese Camphill - (Green Road) (2 points)

Water

Salt and pepper - (Pick n Pay) (1 point)

Cook diced potatoes in a saucepan with water. In another pan, add the oil and then the spinach, cut into thin strips and seasoned with salt and pepper. Do not add water. Drain the excess water in the pan of potatoes and then add the cooked spinach. Mix, forming a sort of puree, and add more salt or pepper to taste.

### Boerewors

Boerewors 1kg - (Woolworths) (1 point)

Traditionally baked on a grill, the group decided to put these typical South African sausages in the oven, where they stay until they are cooked. The literal translation of the name comes from the word "boer" (farmer) and "wors" (sausage). South Africa has specific regulations for this type of sausage which must be composed of at least 90% meat, always containing beef with pork and/or lamb, with the other 10% spice mixes and other ingredients. No more than 30% of the meat may be fat (<http://www.capetown.gov.za/en/>, 1990).

During lunch, Thembisile Memela sang a Xhosa song - "Qongqothwane" which honours a species of beetle that feeds on dung. The song alludes to "cleaning

times" and emphasized the importance of the insect that clears what is "dirty" so that something new and clean may arise. A short sentence of the song is shown below according to an isiXhosa (i.e. the Xhosa language) teacher during a class at Montebello Design Centre during February 2014 – Babalwa Nyangeni:

*“Igqira lendlela nguqongqothwane  
Sebeqabele gqithapha bathi  
nguqongqothwane”*

Babalwa Nyangeni translated this part of the song as “now that the dung beetle has been here, everything is cleaner” and she makes references to the relationships between people as well.

The venue for this lunch was the dining room in the guest house, which accommodated almost the whole group sitting at tables and chairs, but ended up causing other spaces where people brought their dishes to eat in the absence of seats in the dining room. Before serving, the guests washed their hands in a basin with warm water and then had their faces painted with white spots. Each of the face paintings was unique and specific to the 23 participants who joined in that day (including the team itself).

### ***Cooking session #3***

On 4 April 2014, Team 1 composed of Luke Metelerkamp, Eve Annecke, Terence Ward and Tracy Ward (who switched places with Ranen Swilling) interpreted the theme family that was drafted by them in a very simple and beautiful form. For them, a family lunch at the gardens at the SI should be fairly informal, enjoyable and affordable, having the simplest tastes while bringing a greater sense of family. *“Rather than discussing about what family meals are, we decided to make a family meal experience.”* Described Luke Metelerkamp.

Because of this, they asked the other members of the SI to invite their own families to be at the lunch. The result of the invitation could be seen in the huge communal table placed next to the garden, and several people sitting on the grass in a relaxed atmosphere of celebration. In total, 64 people attended; the largest of all the cooking sessions in terms of the number of people present.

The site chosen to serve this lunch was the garden of Lynedoch. *“With some produce from the garden itself, it might not be possible to have a more local*

*experience than this*" - Luke Metelerkamp. The food served on this day was: Eve's green salad, roasted vegetables, organic meat patties, and Luke's bread.

*"It is a beautiful day, the skies are blue and this is an amazing idea."* – Tracy Ward

Family lunch at the gardens – "Family" The ingredients for 64 people were:

#### Green salad

5 heads of lettuces – (Eric Swart's farm) (2 points)

2 kgs of tomatoes – (Eric Swart's farm) (2 points)

250g of olives – (Green Road) (2 points)

400g of feta cheese - (Green Road) (2points)

150ml olive oil – (Woolworths) (1 points)

Pinch of salt – (Woolworths) (1 points)

Pinch of pepper – (Woolworths) (1 points)

Cut the tomatoes into slices, tear the lettuce leaves with your hands creating slightly smaller pieces, chop the feta cheese into small cubes. Gently mix the lettuce and tomato in a large bowl, adding salt, pepper and olive oil. Then add the diced feta cheese and olives, stirring gently to incorporate them into the content.

#### Roasted vegetables

2 kgs sweet Potatoes - (Eric Swart's Farm) (2 points)

4 brinjals - Lynedoch (Gardens n Grounds) (3 points)

10 onions - (Green Road) (2 points)

100ml - olive oil - (Woolworths) (1 point)

Pinch of salt - (Woolworths) (1 point)

Pinch of pepper - (Woolworths) (1 point)

100g chives - (Green Road) (2 points)

Chop all the vegetables but make sure the pieces are not too small. Into a bowl, add the chopped vegetables, olive oil, salt, pepper and chives. Stir to coat all the vegetable pieces with the oil and seasoning. Transfer to a baking dish and place in oven for about 45 minutes.

#### Meat patties and boerewors

4 kg of meat patties - (Spier Farm) (2 points)

1kg boerewors - (Woolworths) (1 point)

Meat patties are portions of seasoned mincemeat and rolled into small discs (what other countries might call a “burger”.) Bake meat patties and boerewors on a barbecue grill. When baking any type of meat, it is important to perform the process commonly called "searing", which literally means sear all sides of the piece as the first step of the cooking process. This will prevent the liquid from evaporating and leaving the meat tough and dry.

#### Luke's bread

Luke brought a bread recipe that is relatively simple and ideal as an accompaniment to soups and meat dishes, and also as part of a picnic in the garden.

2.5 kg flour - (Stone Ground Eureka) (2 points)

2 teaspoons of honey - (Luke's friend) (2 points)

Yeast 100g - (Woolworths) (1 point)

8 cups of water

Salt - (Woolworths) (1 point)

Rosemary 15g - (Gardens n Grounds Lynedoch) (3 points)

Add all dry ingredients in a bowl, mix the ingredients with your hands and dig a



hole in the centre of the mixture as if you were building a small volcano. In the hole, add water slowly. Avoid using water that is too cold, as it will ultimately delay the effect of yeast. Lukewarm water is a better option. Mix with your hands from the centre, incorporating every time, a little of the mixture that is dry at the edges. Add the honey and then the rosemary leaves. Mix the dough until it becomes elastic and finally is less sticky to the touch. If necessary, add more flour. Set the dough aside in a warm place, covered with a cloth so that fermentation can occur, causing the dough to double in size (which, in this case, can take at least 1 hour).

When the dough has doubled in size, make a ball and place on a baking dish. Bake it in a 180°C preheated oven for about one hour.

#### ***Cooking session #4***

On 11 April 2014, Team 6, composed of Mathilda Davis, Tania Klink, Rene Human and Ranen Swilling (who switched places with Tracy Ward on the team that held the family lunch in the garden) wanted to surprise the staff at the SI with a feast. *“[...] our team will not offer a meal. We will offer a whole experience around food!”* – Tania Klink.

The team thought of every detail, starting with the chosen location, the balcony of the guest house which was decorated with flowers and a huge conference table, to the choice of the menu that brought to light the cultural traditions of the coloured community. They opened with a little prayer in Hebrew, following the tradition of "breaking bread" that takes place at an important time in the calendar: Easter. *“At this time of year, all homes in the coloured community, [Kerrievis] is the dish that will be on the table for several days. I always ate with my family but never had prepared it from scratch. It is more practical to buy at the supermarket”* as described by Rene Human. At least 31 people shared this meal. (Many plates were taken out of the guest house by people giving some of the food away to others.)

Below are the recipes from this menu, as well as the history associated with each dish.

#### Breaking bread, Kerrievis and trifle – “Family” Bread

The ingredients used in the bread were:

2.5 kg flour - (Pick n Pay) (1 point)

Yeast 100g - (Woolworths) (1 point)

8 cups of water

Pinch of sugar - (Pick n Pay) (1 point)

Pinch of salt - (Woolworths) (1 point)

Thoroughly mix all dry ingredients into a large bowl. Create a hole in the middle of the mixture and slowly pour in the warm water. Mix in circles, incorporating the flour around the hole. The dough should be elastic and may not be sticky to the touch. By working the dough with your hands, the temperature will be changing, improving conditions for the fermentation process to happen (Casagrande Kaisermann, 2009). Make a ball with the dough and let it rest covered with a cloth in a mild or warm place. The dough should double in size, a process that can take one to two hours. The bread must then be baked in an oven at a temperature of 200°C for about 45 minutes to one hour.

Ranen Swilling recalled a Jewish millennial tradition in which a piece of bread is taken with the hands while reciting a brief prayer in Hebrew:

"Baruch ata Adonai Melech Eloheinu ha'olam, Hamotzi lechem, min  
ha-aretz. Blessed are You, our God, Who has brought forth bread  
from the earth. "

With this prayer, the simplicity of bread contextualises the origin of food: the Earth. A similar tradition can be found in Japanese families. Before beginning a meal, people say aloud "oitadakimassu". The literal translation of the word is "will eat", and saying it aloud leads their thoughts beyond the meal in front of them. By saying "oitadakimassu" they say "thank you" to all who took part in the necessary chain to produce what will be consumed, from the life cycle of plants, to the farmer, to those who sold the food, and ultimately the person who prepared it. My name has Japanese origins and my late father Mamoru Shimahara taught me this tradition more than 30 years ago.

The simple act of stopping before eating to look at the meal and reflect with gratitude, or even think about the entire cycle required to produce this food, seems

to go in the opposite direction of what we see today, in a world where convenience and speed of preparation seem to be the most desired features when it comes to food (Tam, 2008).

### Kerrievis (Curried fish)

For 30 people, the ingredients were:

5kg hake fish (local fishmonger) (2 points)

1.5 kg flour (Pick n Pay) (1 point)

100ml custard powder (Pick n Pay) (1 point)

20ml salt (Pick n Pay) (1 point)

Pinch of white pepper (Pick n Pay) (1 point)

8 eggs beaten with a little water (Pick n Pay) (1 point)

500ml of vegetable oil for shallow frying (Pick n Pay) (1 point)

The fish must be cut into large strips or cubes so that it can withstand the process of frying and being preserved. Heat oil in a pan of appropriate size. The fish pieces should be breaded in flour mixture, custard powder, salt and white pepper and then immediately dipped into the beaten eggs. Fry the fish pieces in the hot oil, and drain the excess oil on paper towels.

### Curry sauce:

8 onions, sliced - (Organic Zone) (2 points)

40g crushed garlic - (Pick n Pay) (2 points)

40g fresh ginger, grated - (Pick n Pay) (1 point)

60g coriander fine - (Organic Zone) (2 points)

60g whole cumin seeds - (Pick n Pay) (1 point)

50g curry powder - (Organic Zone) (2 points)

10g fine cinnamon - (Organic Zone) (2 points)

80g masala powder, or to taste - (Organic Zone) (2 points)

20g chopped fresh red chillies - (Pick n Pay) (1 point)

40g turmeric - (Pick n Pay) (1 point)

40g salt, or to taste - (Pick n Pay) (1 point)

600g sugar - (Pick n Pay) (1 point)

120g apricot jam - (Pick n Pay) (1 point)

3l vinegar - (Pick n Pay) (1 point)

15 leaves of lemon-bay - (Pick n Pay) (1 point)

500 ml water

80 ml lemon juice - (Organic Zone) (2 points)

60g coriander leaves - (Pick n Pay) (1 point)

A handful of dry peaches - (Pick n Pay) (1 point)

Fry the onions and garlic together in a very thin layer of oil. Add the ginger, cumin seeds, cinnamon, coriander, chillies and turmeric and let the mixture fry for a few minutes. Be very careful not to burn the spices, otherwise the taste will be compromised. Add the rest of ingredients for the curry except for the dry peaches, and cook for about 3 minutes, stirring in a gentle way. Lower the temperature and let it simmer for about 20 minutes. Add the dry peaches.

In a glass bowl, alternate layers of fish and curry. Be careful not to break the fish pieces. Refrigerate for at least 2 days so the flavours can develop.

Fishing in the case of South Africa was historically associated with the coloured community, a term accepted in the country to describe a racially mixed population. The vast majority of fishermen in Cape Town speak Afrikaans, and were - and still are today - coloured men. In general, people who prepared the fish were and still are coloured women. A traditional menu for the Easter season in this community is

Kerrievis - pickled fish seasoned with spices, served cold (Norton, 2013). “[...] during Easter time the whole coloured community will be eating Kerrievis. But this is the first time of my life where I will actually prepare it!” – Rene Human.

### Pasta

To pair with the kerrievis, you can prepare a simple dish of pasta.

1kg of pasta such as farfalle (Pick n Pay) (1 point)

Water

1 tablespoon salt (Pick n Pay) (1 point)

100g butter (Pick n Pay) (1 point)

Bring an abundant quantity of water to boil, enough to cover the pasta. Add the pasta into the boiling water, and add a pinch of salt. The cooking time will depend on the kind of pasta that you are using, but usually 10 minutes is more than enough to make sure it is still firm but cooked. Drain the water, add the butter and mix gently so the butter will melt and add flavor to the pasta.

### Trifle

This pudding evolved as a way to use the leftovers. Trifle is found on tables during Christmas, birthdays and other joyful events in many South African Homes – Rene Human. Trifle recipes may be slightly different around the world, but they can be traced back 200 years ago (Walker, 2001).

For this event, the team decided to prepare a sponge cake and then transform it into a trifle pudding.

### Sponge cake

To make the sponge cake, the team used:

400g of sugar - (Pick n Pay) (1 point)

400g softened unsalted butter - (Pick n Pay) (1 point)

8 eggs, beaten - (Pick n Pay) (1 point)

400g of self-raising flour - (Pick n Pay) (1 point)

1 tablespoons baking powder - (Pick n Pay) (1 point)

4 tablespoons of milk - (Pick n Pay) (1 point)

Mix all ingredients together until they form a homogeneous and smooth mixture.

Heat oven to a temperature of 190<sup>o</sup>C and pour the batter in a baking pan greased with butter. Bake the cake for about 20 minutes.

#### Jelly/cream mixture

4 cans of fruit - (Pick n Pay) (1 point)

100ml Old Brown Sherry (South African) – optional – (Pick n Pay) (1 point)

6 canned caramel - (Pick n Pay) (1 point)

2 litres heavy cream - (Pick n Pay) (1 point)

6 jelly sachets – use different flavours and colours - (Pick n Pay) (1 point)

400g custard (powder) - (Pick n Pay) (1 point)

2 l of full cream milk - (Pick n Pay) (1 point)

150g cherries - (Pick n Pay) (1 point)

The day before serving, prepare the jelly, mixing the powder with equal quantities of cold and boiling water, usually for each sachet, 300ml + 300ml are needed. Put into the fridge to cool down. When ready, cut into cubes or small portions the size of a bite.

Cook the custard powder with milk, mixing gently until it has the consistence of a light cream (it should stick to a spoon). Set aside to cool down.

Beat the heavy cream until it is of a stiff consistency. Break the sponge cake into bite-sized pieces.

In a big glass bowl, start by layering the custard at the bottom of the bowl, then layer the sponge cake pieces and sprinkle with Old Brown Sherry, and finally add

a layer of jelly pieces. Open the canned fruit and sprinkle a little bit of the juice from the cans on top of the jelly. Add small portions of the fruit and dollops of caramel. Start the layering process again with custard. Do as many layers as possible. Once finished, cover with the cream and add a few cherries on top to decorate.

### **Cooking session #5**

On the 16<sup>th</sup> of May 2014, Team 4 was challenged to cook something with the theme “Africa”. The team was composed of Rosie Downey, Anton Otto, Mark Swilling and Chantelle Scott. They decided to ask for help from a friend to cook a traditional meal, Yondela Tyawa, who lives in an informal settlement called Enkanini a few miles from the SI. In order to suit the many different tastes of the team, the group decided to be inspired by local dishes, while seeking a variety of options. “[...] for us an African meal has two meanings. One is the meal itself. The other is about the way we eat. We eat together!” – Mark Swilling.

Yondela cooks as if acting on instinct, grabbing ingredients and throwing them into the pan with seemingly no care at all about the amounts of each. For me it was a challenge to monitor so many things happening at the same time, while maintaining close contact with Yondela and his pans. Leaving the kitchen for a moment saw Yondela adding new ingredients that were not listed before.

Africa’s culinary history began with ingredients that were sourced from hunting, gathering, agriculture and herding. Africa is now universally understood to be the place of humankind’s origin but our knowledge of its history of food is more limited than that of other world zones (McCann, 2009).

To serve 34 people, four dishes were prepared and served in the lounge of the guest house, where a large table in the “u” format was set and the food placed in the center. Chairs were placed so that no one had his back to the others.

Meat stew with Umqa, sweet potato soup, spinach on the side and steamed bread – “Africa”

### Umqa

This recipe is a traditional Xhosa meal that contains maize and butternut.

8 butternuts - (Green Road) (2 points)

1,5 kg maize meal - (Pick n Pay) (1 points)

1kg maize meal - grits -(Pick n Pay) (1 points)

2 onions - (Green Road) (2 points)

100ml vegetable oil - (Pick n Pay) (1 point)

Water

Chop the onion and place in a pan with vegetable oil. Cut the butternuts into cubes and add them to the pot, stirring gently for a few minutes. Add enough boiling water to cover the butternuts, then cook for a few minutes until they are soft. Add fine grain maize meal gradually, stirring gently, then add the maize meal in grits. Add more boiling water if necessary. Mix the ingredients thoroughly to combine. The mixture should form a stiff maize meal, but the butternut should be soft.

### Meat stew

To satisfy the most carnivorous palate, the group decided to prepare a beef stew. For this, they used meat from the Spier biodynamic farm, located about 1.5km from the SI.

5 kg of meat - (Spier Farm) (2 points)

1 kg carrots - (Green Road) (2 points)

100g braai spices - (Atlas Spice Company) (2 points)

Salt - (Pick n Pay) (1 point)

Nutmeg 30g - (Pick n Pay) (1 point)

10 onions (Green Road) (2 points)



150ml vegetable oil (Pick n Pay) (1 point)

10 bay leaves (Pick n Pay) (1 point)

Cut the onions into quarters, and add them to a pan with vegetable oil over high heat. Add the diced meat, stir vigorously for a few minutes. Cover with water and boil on high heat. When the meat is tender, add the chopped carrots. Season the meat stew with the braai spices, nutmeg and a few bay leaves. *“When you cook with spices, very soon everybody is talking about the food. As soon as they smell it, they will be curious about it and start talking and making questions trying to anticipate how it is going to taste.” – said Yondela Tyawa.*

#### Sweet potato soup

8kg sweet potatoes - (Green Road) (2 points)

1l heavy cream - (Pick n Pay) (1 point)

300ml milk - (Pick n Pay) (1 point)

50g braai spices - (Atlas Spice company) (2 points)

4 onions - (Green Road) (2 points)

Salt - (Pick n Pay) (1 point)

Water

50ml vegetable oil - (Pick n Pay) (1 point)

Add oil in a pan over high heat, add onions chopped fine, and stir for a few minutes. Add sweet potatoes cut into small pieces, cover with water and boil until the potatoes are very tender. Using a blender, blend this mixture until it becomes liquid and homogeneous. Return to the stove on a low heat. Add the cream and milk, taking care to maintain a creamy consistency. Add the braai spices and salt, and if necessary add more milk.

#### Spinach with turnips

5 bunches of spinach - (Green Road) (2 points)

500g of turnips - (Green Road) (2 points)

2 onions - (Green Road) (2 points)

Salt - (Pick n Pay) (1 point)

10g braai spices - (Atlas Spice Company) (2 points)

50ml oil - (Pick n Pay) (1 point)

Boil a pan of water and cook the chopped turnips for a few minutes until they become soft. Heat oil in a pan, then add the onions, stirring for a few minutes. Add the chopped and drained spinach followed by the turnips that were cooking in another pot. Season with salt and braai spices, and cook until all ingredients are tender.

#### Steamed bread

1kg flour – (Pick n Pay) (1 point)

20g salt – (Pick n Pay) (1 point)

20g sugar – (Pick n Pay) (1 point)

50g yeast – (Pick n Pay) (1 point)

50ml vegetable oil – (Pick n Pay) (1 point)

Water

Mix the dry ingredients, making a hole in the centre of the mixture. Add water gradually and mix into the centre to combine water and dry ingredients to form a smooth dough. Leave in a covered bowl in a mild place so the yeast can make the dough double in size.

What is interesting is how this bread is baked. Yondela washed a plastic bag, put a small amount of vegetable oil inside it, spreading it throughout its interior. The dough is then placed inside this bag, and the bag in turn is placed in a pan with water and a holder or some sort of support to hold the bag above the water level. The pan will go on the fire for about two hours, covered. The steam generated by the water cooks the bread.

*"[...] as a foreigner, the whole experience of cooking with this team was amazing. Sometimes I was listening to people speaking three different languages, this is how diverse this country is." – Rosie Downey*

### **Cooking session #6**

For the last cooking session on 23 May 2014, the team composed of Alvonna Hopley, Bryce Anderson, Olivia Erasmus and Manda Mabeba had Africa as a theme. Every detail gave the group the opportunity to dive into some aspect of African culture. The group enlisted the help of members of other teams who were voluntarily spread around the kitchen and the gardens next to the guest house, where a huge potjie was used to cook the oxtail. Some even made a short trip to a neighbouring community where a speciality of the Xhosa and Zulu culture was found, the Umqombothi beer made from malted maize, sorghum malt, yeast and water (Odhav and Naicker, 2002).

Potjiekos has been part of South African culture for centuries, since the first settlers hung these iron pots over the fire. Today pans are used as well as pots, placed directly over the fire, allowing good, honest food to be prepared (Smit and Heerden, 2000).

In this session, 37 people were served, and the ingredients below provide for this number of meals.

#### Oxtail stew with Umgqusho (samp and beans), morogo, veggie stew - Africa.

##### Oxtail

7kg of oxtail - (Farmer Angus) (2 points)

Water

Salt - (Pick n Pay) (1 point)

10 cloves garlic - (Pick n Pay) (1 point)

1kg tomatoes - (Green Road) (2 points)

50g curry - (Pick n Pay) (1 point)

20g turmeric - (Pick n Pay) (1 point)

250g kolhrabi - (Green Road) (1 point)

2 sprigs of rosemary - (Gardens n Grounds Lynedoch) (3 points)

2kg potatoes - (Eric Swart's Farm) (2 points)

100ml of vegetable oil - (Pick n Pay) (1 point)

Cut the tomatoes into pieces and put them in a pot on the fire, cooking slowly to form a sauce. Place the vegetable oil in a potjie heating directly over the fire, then add the oxtail cut into pieces of about 7cm, keeping the bones. Stir for a few minutes, add water to cover the meat, then add a pinch of salt. Add the cloves of coarsely chopped garlic, curry, and turmeric. When cooking in a potjie, always mix from the sides. Rather than making circles with a spoon, gently lift the mixture from the bottom to the surface. Since the ingredients are very soft and will eventually crumble, this method ensures that the ingredients remain intact, rather than becoming a kind of mash – Anton Otto. When the meat is tender, add the potatoes, kohlrabi and then the tomato sauce made at the beginning.

#### Umqqusho (samp and beans)

The favorite dish of the most renowned Xhosa person from South Africa's history, former President, Nelson Rolihlahla Mandela (Muellers, 2011), is made primarily of sugar beans and a mixture of maize meal.

To prepare this dish you will need:

3kg speckled sugar beans - (Pick n Pay) (1 point)

3L mielies samp - (Pick n Pay) (1 point)

12L water

1 teaspoon black pepper - (Pick n Pay) (1 point)

10 onions - (Pick n Pay) (1 point)

50ml vegetable oil - (Pick n Pay) (1 point)

80g curry power - (Pick n Pay) (1 point)

80g chicken spice - (Atlas Spice Company) (2 points)

Salt - (Pick n Pay) (1 point)

Soak beans overnight, mix beans and samp, add to a pot and pour over the water. Boil without salt until tender. Add water if needed to cook longer. Add salt to taste. Fry the onions in another pan using the vegetable oil, add the curry and chicken spice and cook for a few minutes until onions are transparent. Add this mix to the beans and samp, combine gently and keep cooking until the mixture is soft and mushy.

### Morogo

Although another team used this dish, the recipes vary slightly, leaving an impression that every family makes morogo according to the ingredients they have.

1 bunch spring onions (Green Road) (2 points)

2kg potatoes - (Green Road) (2 points)

500g onions - (Green Road) (2 points)

50g Raja Spices - (Pick n Pay) (1 point)

200g butter - (Pick n Pay) (1 point)

5 bunches of spinach - (Green Road) (2 points)

Salt - (Pick n Pay) (1 point)

50ml vegetable oil - (Pick n Pay) (1 point)

Water

In a deep pan, boil water and cook the potatoes after cutting into small pieces. When they are soft, drain the excess water and add the spinach cut into thin strips, as well as the chives and chopped onions. Season the mix with salt and Raja Spices. Cook, mixing occasionally until the potatoes are falling apart and the other vegetables are tender.

### Veggie stew

To cater for the vegetarians of the SI staff, this cooking team prepared a simple and tasty baked vegetable dish.

4 leeks - (Green Road) (2 points)

2 butternuts - (Green Road) (2 points)

400g carrots - (Green Road) (2 points)

5 cloves garlic - (Green Road) (2 points)

500g sweet potatoes - (Green Road) (2 points)

2 green peppers - (Green Road) (2 points)

5 onions - (Green Road) (2 points)

Mixed herbs - (Green Road) (2 points)

5 tomatoes - (Green Road) (2 points)

100ml vegetable oil - (Pick n Pay) (1 point)

In a pan, add oil, chopped garlic, chopped onion and chopped leeks. Mix for a few minutes until the onions are transparent. Add the chopped carrots, chopped peppers, chopped sweet potatoes. In another pan, add a little oil and the chopped tomatoes, cook over medium heat, stirring until it forms a sauce. Add this sauce to the vegetables you are cooking. Season with mixed herbs and salt, and continue cooking until all vegetables are tender.

Besides the food, the group also decided to offer three traditional drinks. The beer made from sorghum and maize, Umqomboti, as described at the beginning, and then two other drinks. One of them is called Mageu, common in many cultures of South Africa where its name changes according to ethnic group. Mageu is the name given to a Sotho or Shona drink made essentially of water and mielie meal left to ferment; the Xhosa name is amaRhewu or Amahewu the Zulu name (Steinkraus, 2004). Traditionally, this drink was always offered to thirsty travellers within the homes of the community's families.

The traditional Mageu recipe came from one of the group members - Manda Mabeba :

Make thin porridge, cool it and prepare with 1 tablespoon of flour to 5 liters porridge. When it is lukewarm add flour, close the lid and leave to ferment for two to three days. When ready you can add sugar and serve it.

In addition to Mageu, the group also prepared a beer made from ginger.

#### Ginger beer

50g ground ginger (Pick n Pay) (1 point)

2.5 kg sugar (Pick n Pay) (1 point)

24g tartaric acid (Pick n Pay) (1 point)

24g of cream soda (Pick n Pay) (1 point)

Boil sugar and ginger to a smooth syrup, then add to about 10 litres of cold water in a bucket. Add the sugar, tartaric acid and cream soda and stir well. If you can, add pineapple peels. A handful of raisins is also sufficient. Close the bucket tightly and leave for three days, then bottle and refrigerate it, serving it cold.

#### **Reflections on the cooking sessions**

At the end of the meal at the last cooking session, the participants were encouraged to express their feelings and reflections on learning through the sessions. It was an excellent opportunity to obtain short testimonies of dozens of people who were present at the guesthouse lounge.

“Food was a vehicle for connecting people and culture” - Manda Mabeba, or a “way of organising as a family” - Olivia Erasmus. “Food and cooking sessions represented something simple and feasible” Bryce Anderson, and also “brought a new format of relations in the workplace” – Mark Swilling. In addition, “the sessions brought a rescue keepsake about who we are and to promote a better understanding of other cultures” – Litha Magida (Magida, 2014).

To catalyse this energy and start building their future food system at the SI, a session was held with the aim of gathering participants together to dream again

for the next steps. This was called the "digestion session" and it is described in Section 3.5.4.

In total, 178 different ingredients were used during these 6 sessions, which were attended by 24 of the 37 employees connected to the SI. This means that 65% of the staff decided to participate in the cooking sessions. The sessions were held almost weekly over the course of three months, with an event happening every Friday, with just some exceptions mainly related to holidays and the need to fit in both work agendas and scheduled sessions. The number of people who participated as guests, ranged from 18 people (only from the staff at the SI) in the first session in which the bobotie was served, up to 64 people (families and friends invited by the staff at the SI who attended the lunch in the garden). Adding to these two sessions: Kerrievis - 31 people, Umqa - 34 people, Chakalaka - 23, Oxtail - 37, we achieved at least 207 meals served during the experiment. The number is probably higher because it was quite common in all sessions to see people reserving portions and taking dishes to other people outside of the venue.

Appendix 5 shows a summary of the origin of the ingredients chosen freely by the various teams composed of employees of the SI. Analysis of this data suggests that the number of ingredients purchased from major supermarket chains was 64%, while the number of ingredients purchased directly from organic and/or biodynamic producers, with special attention to the Green Road, was only 36%.

As these cooking sessions did not involve financial or political issues, the topic of food became easier and those involved could finally share a meal smiling, and talking about simple things. "It was the first time the entire staff of the SI shared a meal, apart from Christmas" said Tracy Ward. "Due to quite intense workdays, it is common for people to grab a quick bite to eat or eat at their desks" as observed by Louise Bezuidenhout. "Yet the simple act of cooking together or sharing a meal completely changes the dynamic of relationships" also observed by Louise Bezuidenhout. "Memories of this time revolve around the food we ate, the issues we dealt with, and how relationships became more open. When we put food at the center of the table, everything changes" concludes Louise Bezuidenhout.

A comparison between the regular monthly food purchasing and the food purchasing during the cooking sessions at the SI suggests very little variation (Table 17), with the first group (i.e. big retailers) being higher than the monthly average (March 2014 to May 2014) due to the cooking sessions. Gardens n



Grounds also saw very little variation. The biggest variation was found in purchases from the Green Road project from where 26% of the ingredients came (i.e. almost double that of May 2014).

| Comparison - Monthly food purchasing vs. Food purchasing for the cooking sessions |        |        |        |        |        |        |                  |
|---|--------|--------|--------|--------|--------|--------|------------------|
|   | Mar-13 | Apr-13 | May-13 | Mar-14 | Apr-14 | May-14 | COOKING SESSIONS |
| BIG RETAILERS (Pick n Pay, Makro, Checkers, Shoprite, Spar, Woolworths, Bidvest)  | 63,18% | 81,55% | 86,44% | 60,79% | 60,20% | 54,75% | 64%              |
| Gardens n Grounds   | 9,26%  | 4,56%  | 3,63%  | 8,68%  | 3,48%  | 3,35%  | 3%               |
| Green Road  | 0,00%  | 0,00%  | 0,00%  | 3,53%  | 4,38%  | 14,53% | 26%              |

Table 17: Monthly food purchasing vs. cooking sessions – numbers

These findings reflect the way the staff chose the ingredients. Since each team was responsible for buying the ingredients for each session and was then reimbursed by me, no budget barriers existed.

When compared to the average of the three months (March 2014 + April 2014 + May 2014)/3, Table 18 shows that:

|  | Average (March 2014, April 2014 and May 2014) | Cooking Sessions | Increase / Decrease |
|--|---|------------------|---------------------|
| BIG RETAILERS (Pick n Pay, Makro, Checkers, Shoprite, Spar, Woolworths, Bidvest) | 58,58%  | 64,00%           | 8,47%               |
| Gardens n Grounds  | 5,17%   | 3,00%            | -72,43%             |
| Green Road   | 8,34%   | 26,00%           | 67,91%              |

Table 18: Regular food purchasing vs. cooking sessions – increase/decrease

The consumption from Gardens n Grounds fell by 72.43% and Green Road experienced an increase of 67.91%. Big retailers were the less-affected group with an increase of 8.47%. These numbers raise a number of questions about budget: is it really a barrier, or is it culture that must change? *Can* culture be changed? *Must* culture be changed?

Patel (2012) points out a few pillars that must be changed in order to transform the food system. At the heart of his argument is the idea of transforming our tastes to be able to eat locally and seasonally, while supporting locally owned businesses.

Local businesses in our research could be represented by small cooperatives like Green Road and even the gardens of Lynedoch.

The proposal of a simple point system is shown in Figure 6:

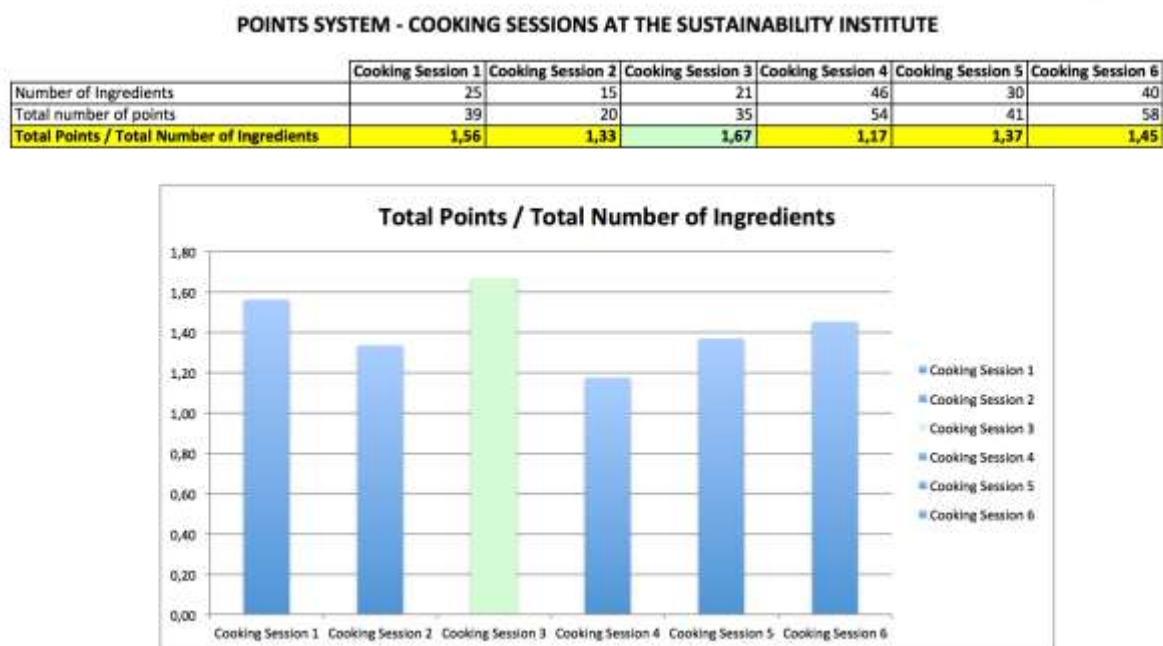


Figure 6: Points system applied to the cooking sessions

According to this system, sessions were given a score according to the total amount of points divided by the total number of ingredients. A recipe made only with products coming from the gardens of Lynedoch would score 3 points; on the other hand, a recipe with ingredients derived only from big retailers would score 1.

Cooking session #3 scored the most, which points to a recipe where the ingredients were more local, coming from small businesses close to the SI (even from Lynedoch's gardens), than the other recipes.

Cooking session #4, however, scored the lowest number of points and was thus the least local and organic.

#### **4.1.8 Step 4B: To host a "digestion session" where the team will reflect on the cooking sessions, and engage to create a food system for the SI that is more aligned with its ethos**

On the 27th of June 2014, part of the SI staff (14 from 24 participants of the cooking sessions) gathered to discuss the future scenario of the food system at the SI. The discussion was conducted using a focus group method (Stewart, Shamdasani & Rook, 2007) mixed with the World Café method (Brown & Isaacs, 2005) in order to improve the number of connections.

Next, the summaries brought by each one of the hosts is described (please refer to Section 3.5.4). It is important to remember that each host explains a summary of all the conversations in "his/her" table. Therefore, these hosts represent the ideas and opinions of the staff that was present during this session.

#### **Summary of discussions from the World Café**

Continuing the World Café (Brown & Isaacs, 2005), the first question I proposed to the group was: "How do you feel about the food purchased at the SI?" The first group, represented by Nobelusi Kenyana (Kenyana, 2014), summarised a divided sense of happiness and disappointment. The disappointment was due to the fact that they realised that the food expenses at the Sustainability Institute did not necessarily align with the ethos of the institution. At the same time, they felt happy because now, in possession of hard data, they could move in another direction as said by Nobelusi Kenyana (Kenyana, 2014). Similarly, the group represented by Litha Magida (Magida, 2014) felt unhappy to see the results about the purchases of food made at the Sustainability Institute and thought time should be dedicated to producing more food, especially to feed the children who attend the daycare and aftercare. Luke Metelerkamp (Metelerkamp, 2014b) summed up the conversation with his group as also having mixed feelings. They were disappointed when shown the numbers, but also felt that this fueled a growing need to take a position on this issue.

The second question posed was directly related to people's perception of the cooking sessions: "Why cook and eat together?" As the main intention of the cooking sessions was to bring people together around food, Nobelusi Kenyana summarised a conversation with members of his group that converged with the purpose of this thesis. The group acknowledged that cooking and eating together builds community around food and brings out cultural nuances of each person,

and gave the example of the use of sugar in several different ways according to the origins of each person – Nobelusi Kenya (Kenya, 2014). Following with a very similar perception, Litha Magida's group mentioned the meeting of cultures and different perspectives that each person brings to the meal, which is often demonstrated by the different ways of cooking. They also mentioned that connecting people through food creates an understanding of the values of the site, and that the cooking sessions brought about new values in this regard – Litha Magida (Magida, 2014).

Luke Metelerkamp's group (Metelerkamp, 2014b) shared their feelings of joy and pleasure, which were a constant part of the cooking sessions, and how they can result in the strengthening of relationships and linkages between the various people participating. As the group had to choose recipes together, get together in order to cook ingredients and then finally serve the meal together, another important skill developed during the cooking sessions was collective problem-solving. Another very important point was that the sessions helped people to acknowledge the challenges around the "simple" act of cooking for others – Luke Metelerkamp (Metelerkamp, 2014b).

The third question asked was: "What have I learned from the cooking sessions?" It brought out many memories of past Fridays in the kitchen, preparing a meal to serve to coworkers or sometimes just sharing a meal prepared by other colleagues. One of the biggest learnings seems to have been a reflection on our role as consumers, not just within the SI, but in our personal lives - how we think and react to food. Experiments in the kitchen were actually a form of action, and not just thinking or talking about food. A series of new recipes were learned and participants reflected on which system they want to support. Money spent buying meat from pigs reared in factory farms, for example, is a kind of vote that supports this system, while at the same time denying support to small local manufacturers who do things differently – Luke Metelerkamp (Metelerkamp, 2014b).

The learning and consequent respect for other cultures, fun and interaction with other people, and teamwork, appear in the summary from Nobelusi Kenya as the strong points of the cooking sessions (Kenya, 2014). Seeing people from other cultures cooking brought a sense of respect and connection. This connection happened even within families, as was the case with one of the participants, who ended up deepening the relationship with her own mother when talking to her about food and how to prepare a certain dish. Fridays were a "dose of happiness"

through the cooking sessions, and provided a new look at some types of food, which previously inspired a negative attitude – Litha Magida (Magida, 2014).

### **Dreaming a new food system at the SI**

From these questions, we headed for the “future” session. What would a common dream of a new food system at the SI look like? The "dream" is an important step of the Elos methodology (Elos, 2013) and it is through this simple word, that ordinary people are asked to exercise their creativity and boldness without limits. Dreaming disarms the mind; dreaming is something that is within reach of any person anywhere (Gouveia Jr., 2011). Whatever the plan, the dream is the first step of realisation. It is this step, which can challenge what appears to be concrete and permanent, and where we plant the seed of change in our hearts and minds.

When challenging the SI team to imagine without limits what the “dream” food system for this institution would look like, creativity and the ability of different groups emerged, as seen in the presentations by many hosts.

The SI staff imagined greater diversification in the production of Lynedoch, coupled with better communication throughout the team to eventually improve the planning of this production, and at the same time reduce waste. Children in daycare and aftercare would eat more vegetables and even participate in the production process. The addition of animals such as chickens could contribute to a more diverse production as said Tania Klink (Klink, 2014b) during this session.

“Food is bonding, unifying the diverse and helping to bring beauty, joy and connection with nature. The staff imagined a food system that gave the option of waking up and harvesting the products they wanted, as well as having food as a vehicle for education and learning. The cooking sessions would continue on a monthly basis, and there would be greater attention given to the consumption of local and organic products” - Nobelusi Kenyana (Kenyana, 2014). “They would create a forum where people could discuss what is being produced in the garden or even share recipes that utilise these ingredients. They would also discuss the implementation of systems to allow an increase in production, such as irrigation. Apprentice gardeners would also be available to assist in food production. Furthermore, a "common kitchen" would produce the same food for all initiatives of the SI” – Litha Magida (Magida, 2014).

The food system at the SI would become a source of inspiration for all. People would look at the SI and think: "Wow! Look at what they have done." It would attract people with a passion for food who like to share food as well. It would be possible to invite people from the community, whether Lynedoch Ecovillage residents, students or even "outsiders", to participate in communal meals. A kind of circular economy would be established from the start to feed back to generate "locally harvested money" – Luke Metelerkamp (Metelerkamp, 2014b).

From these dreams of many different people in many different teams, the challenge would be to bring a unified view on what would be the cornerstones of a new food system at the SI. For this to happen, after expressing their individual dreams, the groups were invited to sit at a single table and then write on a single sheet of paper, the main "ingredients" - the name I decided to give to these cornerstones of this common dream. Photo 3 is a photo of the original sheet from this digestion session. On it are various elements that serve as a compass, guiding the actions of all the teams at the SI. More than that, this photo represents a common dream, a vision of the future for a food system more aligned with the ethos of the Sustainability Institute.

The first ingredient, "local organic", brings great clarity about where the budget or effort at the SI should point in the future. The SI has a relatively privileged position in this regard. It is located a few miles away from an important micro-producers' cooperative (Green Road, 2014) whose values echo one of the pillars of the institution with regard to poverty eradication (Sustainability Institute, 2012). In addition, they have within their campus - Lynedoch Ecovillage - space for the cultivation of food. This factor, in addition to enabling the production of food locally, has the ability to directly affect the education of children who attend school, daycare and aftercare. According to a study conducted in schools in California, children who have contact with edible gardens improve their academic performances, their skills related to art, and also their physical well-being, as their nutritional habits become healthier (Graham and Zidenberg-Cherr, 2005). Besides being located close to the food producer, the term "local organic" also describes what type or method of farming should be used for the production of the food consumed at the SI, in this case, organic agriculture.

"Simunye kitchen" was the expression given by the group to summarise some elements present in the talks conducted by the World Café, as a way of materialising a sense of "common" or "community". The Brazilian writer and

teacher, Fabio O. Brotto, created a new word by separating the word community in two. The word "common-unity" appears to connect the sense of "common" also the "one" or "unity" (Brotto, 2002). Simunye is a word that has its origin in the Zulu language that can be translated to mean "we are one". "The kitchen becomes the meeting place, which again makes food the central point around which we gather and where we see ourselves as one family, one community" - Litha Magida (Magida, 2014). At the same time, it states the intention of bringing everyone closer. "For the Lynedoch community and its visitors, whether they are Master's students, children from the nursery, or employees, the kitchen and food makes us 'one'." – Litha Magida (Magida, 2014).

The third ingredient of the future food system at the SI emerged from the experience of gathering around food or sharing a meal. "The expression "passion loving energy" illustrates the lightness and passion felt by groups during the various cooking sessions and also helps to bring other elements around the main objective of food, often merely seen as nutrition for the body" – Tania Klink (Klink, 2014b). A new relationship with food that incorporates passion, love and energy becomes a key point for redesigning the complex food system at the SI.

The fourth ingredient, described by the group through two different words "learning and leading" was described as "a way to use their food, its origin and preparation, simultaneously to lead by example and also as a learning platform. This is learning that occurs through experience, and continues steadily, non-stop. By facilitating a food system that is more aligned with its own values, the SI shall lead by example while teaching at the same time" – Tania Klink (Klink, 2014b). Moreover, it becomes a living example that may prove a challenge in several modules aimed at sustainable development such as we have seen previously.

Finally, the fifth ingredient makes mention of "collaborative planning". This is a fundamental step in redesigning the food system at the SI. It should incorporate to the fullest possible extent, the staff from the SI in taking a more strategic approach that connects purchases made at markets or cooperatives, such as the Green Road project, with the menus created in the kitchen and subsequently provided to students, staff and children at the daycare and aftercare, and finally, with the gardens of Lynedoch which could certainly benefit from a plan to reduce the food waste and produce healthy ingredients.

These five ingredients in turn express a "sense of place" to demonstrate that what

we are ultimately looking for is an identity for the food system at the SI. The food should be able to create pleasant memories for the people who work there, or for students attending the facility. Just as the food at Schumacher College seems to be something absolutely unforgettable (Curi, 2014; Metelerkamp, 2014), the food at the SI should seek to convey meaning, and identity.

The discussion focused on the past - the statistics of the food system at the SI (Step 3A), the present – a reflection about the cooking sessions (Step 3B), and the future of the food system at this institution (Step 4B).

Together, the staff present at the meeting decided that the main ingredients for the future food system at the SI should be:

- Local organic
- Simunye kitchen
- Passion loving energy
- Learning and leading
- Collaborative planning

These ingredients together would express a “sense of place”.



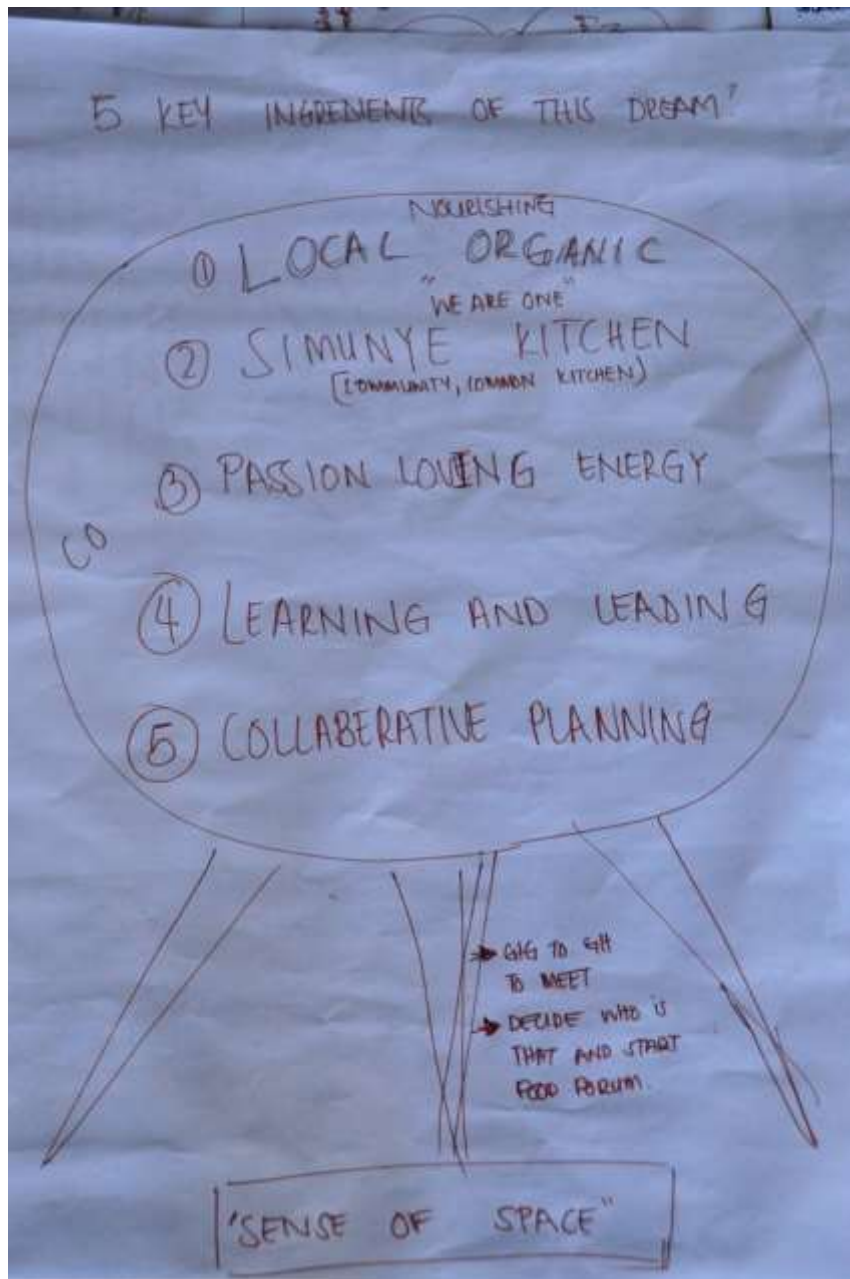


Photo 3: Future food system at the Sustainability Institute as drawn by the SI staff.

## 4.2 Connecting the findings with the research questions

At the beginning of this work, two research questions arose and a research strategy was designed to reveal the answers. Table 1 presents details about each step taken in answering the research questions.

### **(A) As an institution dedicated to the teaching and practice of sustainable development, what is the role of food and what is consumed at the Sustainability Institute?**

Step 1A showed that the food is processed in the main kitchen at the guest house, and light meals are also prepared in the small kitchen at the Green Café. The main kitchen has the challenge of preparing up to three different kinds of lunches, serving more than 120 meals on a daily basis, with the help of two full-time staff members.

Step 2A showed through a series of semi-structured interviews (Lavrakas, 2008; Given, 2008) with the staff (Klink, 2014; Ward, 2014; Anderson, 2014; Bezuidenhout, 2014) that food at the SI appeared to be something at the periphery of discussions or even disconnected from the whole (Anderson, 2014).

Step 3A's quantitative research (Balnaves & Caputi, 2001) seems to confirm the perspective captured during the interviews, and showed that during March 2013 (63.18%), April 2013 (81.55%) and May 2013 (86.44%) the vast majority of food items came from various large supermarket chains, supporting the consolidation of the sector (Reardon et al, 2003; Patel, 2012). In comparison, during March 2014 (60.79 %), April 2014 (60.20%) and May 2014 (54.75%), these numbers decreased. The detailed analysis of all food purchase receipts of the months of March, April and May of 2013 and the same three months of 2014 suggests that in 2013, an average of 77.06% of the food the Sustainability Institute consumed was bought directly from large supermarket chains like Checkers (Checkers, 2014), Game (Game, 2014), Makro (Makro, 2014), Pick n 'Pay (Pick n Pay, 2014), and Spar (SPAR, 2014), some of them being among the largest retailers in the country and members of the world's largest company, Wal-Mart (Jackson, 2012). By sourcing their food in this way, the SI ends up contributing to the consolidation of the global food system that has been happening across the globe (Patel, 2012).

Step 4A indicated that although the education at the SI is focused on sustainable development (Sustainability Institute, 2012) and food is addressed using a sustainable development approach in at least four of the educational modules aimed at PGD, Masters and PhD students (Appendix 1), the kind of food served at the institution and the relationship between people and food seems to be an underestimated and somehow neglected subject. Therefore what is being applied in practice is in direct contradiction with what is taught. This is in turn in direct contradiction of the SI's philosophy of creating an environment where learning takes place experientially.

During the observation period of Step 1B, the lack of interaction between people and food in the Lynedoch gardens also confirmed the disconnection between the two. No one besides the staff dedicated to it was seen interacting with the gardens during a non-compulsory moment.

Stanford University (Stanford University, 2015) in comparison, has a more holistic vision for their Sustainable Food Program, which is “dedicated to educating students and the community about how their food choices impact the environment. In collaboration with students, staff, and faculty, we raise awareness through lectures, special events, academic partnerships, and hands-on learning in our cooking classes and organic gardens.”

This program aims to ensure that all the food purchases at the University are:

- LOCAL: Food that is grown, raised or processed within 150 miles of campus.
- DIRECT: Food that is purchased directly from independently-owned growers, producers and manufacturers.
- ORGANIC & SUSTAINABLE: USDA certified organic produce, processed items, meat, dairy, poultry and byproducts thereof, and Seafood Watch-approved seafood.
- HUMANE: Meat, dairy, poultry and byproducts thereof that originate from livestock that were allowed to range freely and to express their natural instincts and behaviors for the entirety of their lives.
- FAIR: Food that is traded at economic, social and environmental parity.

(Stanford University, 2015)

Within the limitations of and specific context at the SI, creating a similar strategy could be the first step in aligning its practice with its ethos. A strategy however is probably not enough. The example of Stanford is only a theoretical example of an institution dedicated to education where food possibly plays an important role. Deeper research is needed to investigate the alignment or misalignment with its ethos as well.

The example of Schumacher College was brought up in different interviews as a place where food plays a very important role (Bezuidenhout, 2014; Curi, 2014). Not only by planting and harvesting together, but also cooking and eating together (Curi, 2014). The main difference to the SI in this sense comes from the fact that the staff there would participate in the compulsory community work - but then "...everyone goes to his/her office and they're not seen together anymore. They don't eat together" (Curi, 2014).

Another former student at Schumacher College – Juliana Schneider – was asked about the role of food at that institution: "There is something that you will find in almost every answer when you ask this question to someone that has had contact with Schumacher: the kitchen is the very heart of Schumacher College" (Schneider, 2015).

The whole process of harvesting, having contact with organic agriculture, and meeting the people who grow your food, followed by the informal conversations about very important subjects in the kitchen while preparing the meals and eating together, is a process of nourishing a community (Schneider, 2015).

Juliana Schneider is the founder of Schumacher College Brazil, and brought to the South American country the culture around food that is the foundation of the college.

**(B) How can a simple cookbook, created and shared by the Sustainability Institute community, be used to inspire reflection about the role of food at this institution?**

The idea of inviting the SI staff to cook together and leading by example in Step 2B, initiated a series of cooking sessions involving 65% of the staff, divided into groups to prepare and serve a meal to the SI community. The meals in total used 178 different ingredients, 36% of them derived from the Lynedoch gardens (allowing people to interact with the food at its origin) and from the Green Road

project.

Step 3B then engaged all the staff at the SI to reflect about food, through a strategy of gamification (Kapp, 2012; Koster, 2005) in addition to a framework of a Brazilian methodology named Elos (2013), both aiming to inspire action by having fun as an important element of the journey.

In Step 4B, a digestion session was organised where the staff participated through focus groups (Stewart, Shamdasani and Rook, 2007) and the World Café method (Brown and Isaacs, 2005) in deciding what would be the main ingredients of the future food system at the SI. During this last meeting, a great appreciation for the cooking sessions was shown and a desire to move towards a food system more aligned with the ethos at the SI was expressed (please refer to Summary of discussions from the World Café at the end of session 4.1).

Finally, The Sustainability Institute Cook Book was created from the recipes in Chapter 4 and can be seen in Appendix 6.

The series of cooking sessions brought the SI to reflect about food. The future food system as pictured in Photo 3 is evidence of this process of reflection, and this series was also an important ingredient that converged with other initiatives around food at the SI (details will be shown in the next chapter in “a glimpse of the future”).

A deeper analysis of the food intake is needed (i.e. similar to what was done in this research for 3 months in 2013 and another 3 months in 2014) in order to make a quantitative comparison.

However, the cooking sessions did not continue, organised by the SI community itself, confirming the words of Louise Bezuidenhout (2014) who “bet” that these sessions were very unlikely to happen again without the effort of a leader. The cooking sessions alone were not enough to change the culture around food at the SI.

### **4.3 Chapter summary**

In order to answer the two research questions, a research design was put into place (Table 1). This design was composed of different steps in order to investigate the system, and at the same time, propose and participate in action to

cause reflection around food and its role at the SI.

The research effort totalled 44 hours inside the kitchen, 53 hours inside the Green Café and 27 hours in the gardens of Lynedoch. Adding to these numbers, six cooking sessions with an average duration of five hours (from preparation to sharing of the meal) and a digestion session that lasted for another four hours.

Even after that effort, the reality of the food system and the role of food at the SI, seems to be hard to grasp with precision.

A few interviews that preceded the deeper investigation would suggest that food is not a central element at the SI (Anderson, 2014; Curi, 2014; Bezuidenhout, 2014, Ward, 2014). When compared to the same situation at Schumacher College that plays a similar role in UK when it comes to “education for sustainability”, the difference is significant and can even cause a “shock” for someone coming from there to visit the SI (Curi, 2014). These interviews would also suggest that the role of food at Schumacher College is central. “The kitchen is the heart of Schumacher College” (Schneider, 2015) is a clear statement that shows the potential role of food when it comes to education for sustainable development. The contexts of the UK and South Africa are completely different, and even the logistics involved are not similar (Bezuidenhout, 2014) thus, raising the question of whether something equivalent could happen at the SI.

Food at the SI is a complex subject and even a “hot point” (Ward, 2014). An investment of 44 hours in the main kitchen confirmed the logistics to be very intricate (Figure 5) and might suggest a lack of trust or broken relationships between the actors, as said by Tracy (Ward, 2014).

A quantitative analysis of all the food purchased at the SI during three months in 2013 and the same three months in 2014 demonstrated that the big retailers (Figure 7) are the favourite source of food for the SI, ranging from 54.75% (May 2014) to 86.44% (May 2013) thus, supporting the consolidation of the market.



Figure 7: Food purchasing from Big Retailers at the SI

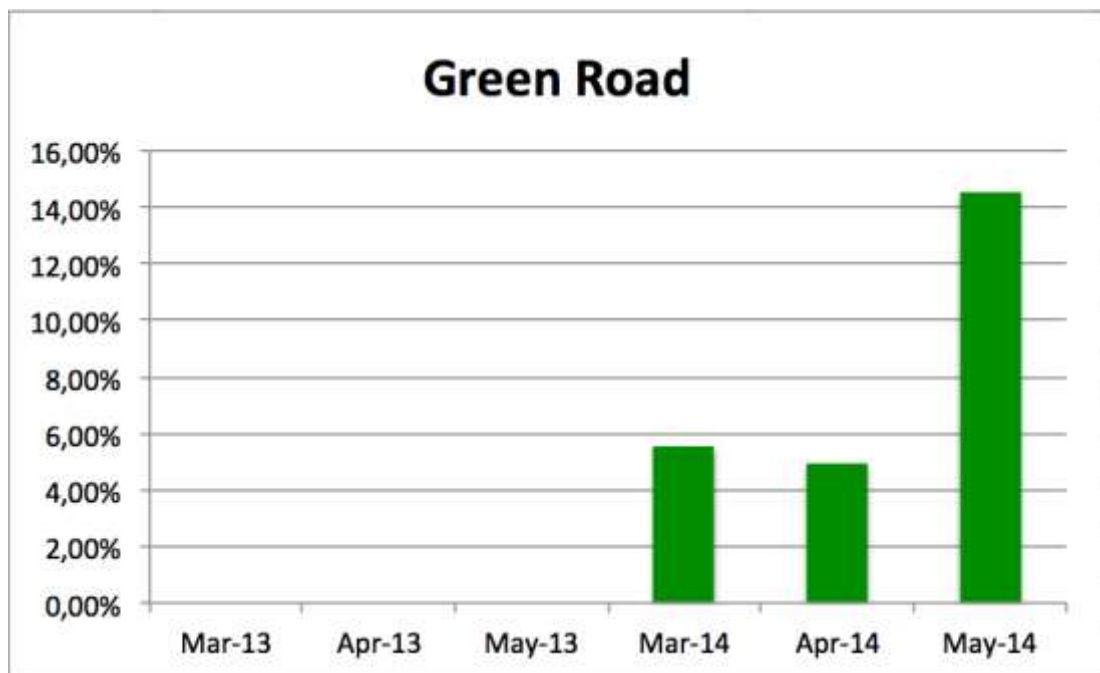


Figure 8: Food purchasing from Green Road at the SI

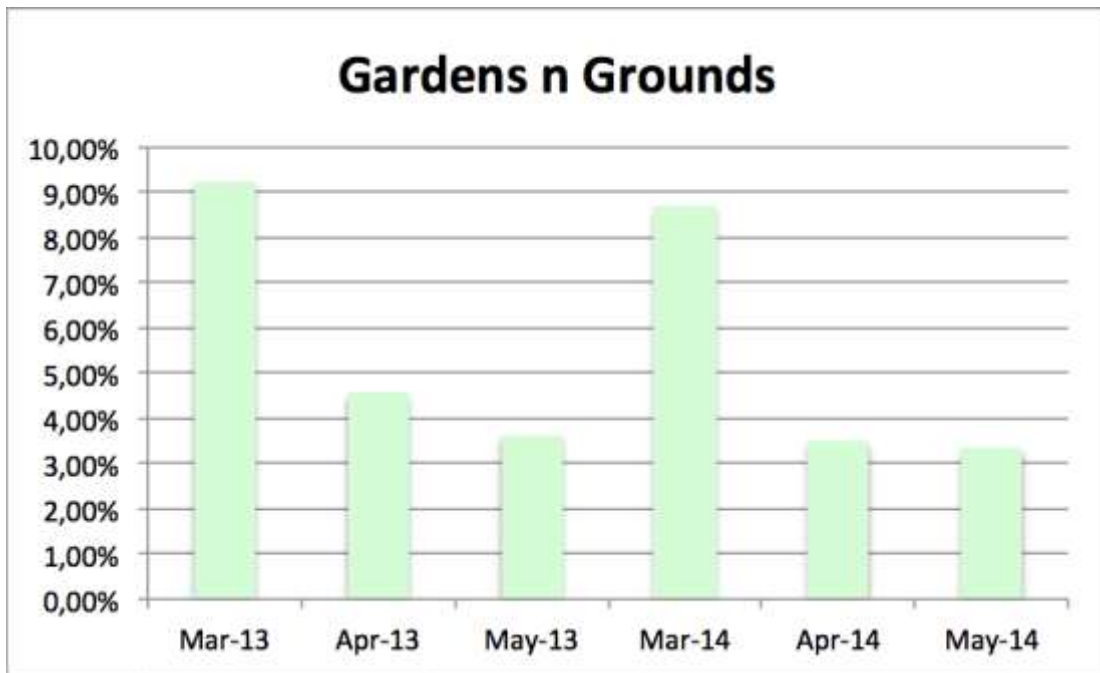


Figure 9: Food purchasing from Gardens n Grounds at the SI

Figure 7 demonstrates an absolute majority of items purchased in large supermarket chains during the studied months of March 2013 (63.18%), April 2013 (81.55%) and May 2013 (86.44%) and subsequently March 2014 (60.79%), April 2014 (60.20%) and May 2014 (54.75%). The decline between the two years can be interpreted as due to the growing interest and attention on the topic of food, and evidenced by the increase of purchases from local producers, with a focus on organic and/or biodynamic farming from one year to another. Adding the columns for Gardens n Grounds with Green Road (Figures 8 and 9) we obtain 9.26%, in March 2013, 4.56% in April 2013, and 3.63% in May 2013. Compared to 2014 there seems to be an increase in local purchases: 14.21% in March 2014, 8.46% in April 2014 and finally 17.88% in May 2014. Moreover, it is important to note that the cooking sessions took place between March 2014 and May 2014 and the increase in local purchases could be due to their influence. It should be noted that items from small local businesses and even local supermarkets where the origin and method of production (organic/biodynamic) could not be clearly identified were removed from the count. Table 17 offers a comparison in summary.

An important limitation of this study, however, is that the same quantitative analysis was not performed for 2015, which could show a trend when it comes to the purchasing of food at the SI.



In order to create a simple system that could indicate when more local or community-oriented decisions were made, a point system was proposed and Figure 6 offers an example. This system is something that can be used inside the kitchen, for instance, and be shown to different clients.

When it comes to education about sustainable food systems, the SI offered five modules (from 24 in total) i.e. at least one week long, from Monday to Saturday, from 08h00 to 17h00, where food plays an important role. The education given in the classroom, however, seems to be at odds with what is actually happening in the kitchen.

An observation phase pointed out that the gardens from Lynedoch (i.e. Gardens n Grounds) are rarely visited by the staff of the SI. Although the observation period was performed during the work hours of this staff, limiting the time window for them to be able to access the garden, no one from the kitchen was seeing interacting with the gardens. The lack of time due to a “food preparation frenzy” which takes place on a daily basis, cooking at least 3 different kinds of lunches up to 175 people (Figure 5) could be one of the reasons why this contact does not happen.

In order to inspire reflection around food, an invitation to a game was given (Figure 4) and six different cooking sessions were hosted at the SI. During this sessions, 24 of the 37 members of the staff, divided into six teams (Table 5) would decide on a recipe with virtually no budget limit, buy the ingredients and cook a meal to be offered to the whole staff.

The choices of ingredients for these sessions, however, suggest that even without a budget limitation, the big retailers still represent the first choice when it comes to purchasing of food. With 64% of all the 178 ingredients mapped during the cooking sessions coming from big retailers, this number is bigger than any of the other months analysed in 2014 (Table 17). At the same time, the purchases from the Green Road project was the biggest percentage, 26%, when compared to the same months analysed in 2014. At least 207 meals were served during these cooking sessions.

Another important finding during the cooking sessions is the fact that every session would offer some kind of animal meat. Either fish or beef was chosen in all the sessions, pointing to a culture (i.e. when it comes to food choices) among the

staff that is completely different from the vegetarian meals served to the students.

A digestion session was hosted in order for the staff to reflect on the past, present and future of the food system at the SI. They identified five desired components for the future food system at the SI:

- Local organic
- Simunye kitchen
- Passion loving energy
- Learning and leading
- Collaborative planning

Together these ingredients help to express a “sense of place” through food.

## Chapter 5: Conclusions

### 5.1 Building community around food

In the very distant past, our ancestors gathered around campfires to share what they had harvested or even hunted (Kelly, 2013). This proximity to the source, the meeting around food, and even the joy of this moment, seem to be farther and farther away from our current reality (Patel, 2012) as the chain of food production, distribution and consumption is stretching and becoming increasingly complex (Ackerman-Leist, 2013).

We are living in a world where we want everything now, and the term 'fast food' has arisen to express this demand for convenience and speed (Tam, 2008). Huge supermarket chains that spread throughout the world (Reardon et al., 2013) have become the temple of modern consumption where the flow of people is studied and the environment is controlled in order to encourage people to buy more and more (Patel, 2012).

The consequences of this detachment are disastrous, causing environmental damage (Foley, 2014). Social issues are left to one side: while more than a billion people are overweight, on the other hand, another billion is malnourished (Patel, 2012). Adding to this, there is a colossal amount of food waste that represents 30% to 50% of everything we produce (Stuart, 2009; Institution of Mechanical Engineers, 2013; FAO 2013). The high cost of this overproduction in turn worsens the environmental damage, since we need a much bigger area to grow what may not even be necessary (Stuart, 2009).

Facts like these may be far away from the mainstream media but are important elements when it comes to education, and cannot be ignored by the curriculum of an institution that gives itself the name Sustainability Institute. Besides the curriculum, however, the spirit of a culture or community as manifested in its attitudes and aspirations. (i.e. its ethos) must also be aligned to what is taught in theory and practice.

When I first visited the SI's kitchen, one image stuck in my mind. I saw several cans of fish being used to prepare the meal for the children in the crèche (Photo 4). The first thought that came to mind was that we were only about 15km from the ocean and still, canned fish was the choice. That was, perhaps, the spark that led to this work being aimed at the Sustainability Institute itself.



Photo 4: Canned Fish - Lucky Star

Three main objectives for this research were proposed, as described in Chapter 1.6:

|   |  |   |
|---|--|---|
| <p><b>OBJECTIVE #1:</b><br/>To try to understand the current state of the SI's food system in terms of its alignment with its values (i.e. education for a more sustainable world).</p> | <p><b>OBJECTIVE #2:</b><br/>To explore ways of improving the SI's food system through the engagement of all its employees.</p> | <p><b>OBJECTIVE #3:</b><br/>To create a list of recommendations, implementing whatever is possible during the writing of this thesis.</p> |
|---|--|---|

These research objectives were achieved using different methodologies (Table 1) and a summary of the findings is presented in the sections that follow, along with comments from this author.

**Objective #1: To try to understand the current state of the SI's food system in terms of its alignment with the SI's values (i.e. education for a more sustainable world)**

As described in Chapter 4.2, food at the SI is a subject that is not at the center of discussions and seems to be disconnected with the education and ethos of this institution. Interest in the subject, however, seems to be growing (Klink, 2014; Ward, 2014) and Section 5.5 confirms this trend.

Interviews were not at all capable of bringing to the surface the intricate and complex relations of food at the SI. This research was very time consuming, as well as stressful and frustrating. This frustration was foreseen by some of the staff members who were interviewed (Bezuidenhout, 2014; Ward, 2014), suggesting that food was a “hot point” and identifying the need for leadership in this area.

Immersion in daily life at the SI, and the investment in building relationships with the staff, were crucial to reach layers that were not exposed during the recorded interviews. These helped to reveal the clearly broken relationship between the kitchen and the gardens in Lynedoch, for example, illustrated by the story of the “basil” in Section 4.1.

Different cultures enjoy different tastes, and something that the kitchen team may enjoy eating, may not be embraced by students and other clients.

One of the key characteristics of a complex system are the feedback loops (Cilliers, 1998; Capra, 2014). These feedback loops can be represented by the relationships between the staff at the SI. If these relationships are broken as suggested (Ward, 2014), the food system will also break down. The decentralised purchasing of food (Figure 5) also suggests a lack of trust or at least a lack of a feedback loop between the actors who try to preserve their own stock, using the kitchen as a processing unit only, and who act as individual sub-systems.

The detailed quantitative research described in Chapter 4.1 (see the summary in Table 9) shows the vast majority of products are sourced from large retailers,

which in effect aim the budget towards large corporations instead of the closer community of farmers and small businesses. This therefore contradicts what is taught, in that a more sustainable food system should incorporate seasonality, localization, and the support of local communities (Patel, 2012).

**Objective #2: To explore ways of improving the SI's food system through the engagement of all its employees**

The collective building of a cookbook was a way to engage the employees at the SI. The use of methodologies that encourage collective participation, such as the Brazilian methodology Elos (2013), appear able to connect an entire community. This connection occurs around the elements that compose a community (people, environment, history and culture) and then around a common dream that will be realised by the community (Elos, 2013). This methodology seems to fit perfectly with what Cilliers (1998) calls complex systems, leaving a large space for the emergence of creativity, ideas and solutions that emerge from the relationship of these elements. The Elos methodology (2013) inspired above all lightness, joy and the sharing of personal stories of each employee of the SI during the cooking sessions.

In these sessions, teams worked together to create recipes and share stories, cultures and childhood memories, as well as prepare meals that were served to dozens of people who make up the larger family of the SI, including interns, family, and on occasion, guests who were visiting the SI. The high level of participation from the employees of the institution (65%) meant that six cooking sessions were capable of serving at least 207 meals. They used at least 178 ingredients, of which 36% originated in small organic/biodynamic local producers. This shows the power that food has to bring people together. More than that, it can make these occasions moments of joy and community building, where people could learn to respect other cultures as described by Nobelusi Kenyana and Litha Magida during the session. In addition, it can connect families around recipes that are part of their history, as described by Manda Mabeba (Please refer to Chapter 4 – digestion session).

A cookbook created from these experiences was the perfect practical application for an extremely complex topic that spans social, cultural and financial layers, in a light and above all enjoyable manner.

After all the cooking sessions were completed, a brainstorm was held to plan for the future of the food system at the SI, which we named the "digestion session". This session revealed that the participating group was clearly able to see the disconnection between the food purchases of the SI and the ethos of the institution as confirmed by Nobelusi Kenyana (please refer to Digestion Session in Chapter 4). In addition, the group outlined a future food system for the SI with five main ingredients: local organic, Simunye kitchen, passion loving energy, learning and leading, and collaborative planning. These ingredients together create a 'sense of place' for the community, reflecting its connection to the environment, the space it occupies, the ingredients it uses and the people who are part of it.

However, once I had stepped down as leader of the process, the cooking sessions (which were a vehicle to connect the community, creating the loops and perhaps helping with the improvement of relationships) stopped, confirming the prediction of Bezuidenhout (2014).

**Objective #3: To create a list of recommendations, implementing whatever is possible during the writing of this thesis.**

Please refer to Section 5.3 and 5.4, which provide recommendations and opportunities for further research.

## **5.1 Personal reflections on the research experience**

For me, it is quite difficult to write a purely "scientific" text. Particularly, I feel that very few people will read this master's thesis in its entirety. Perhaps only my evaluators will do so. For others though, the most interesting parts may be the introduction and the conclusion, and for others still, only the recipes. This leaves me with a sense of frustration and great happiness at the same time. Frustration due to the huge amount of time invested in these lines, having started work in February 2014 and finishing it almost 18 months later, knowing that in the very near future it may be lost in some forgotten file, along with thousands or perhaps millions of other works that students like me are creating around the world.

This work reflects my way of thinking and acting in the world around me. There is a little piece of myself in each line of this work. While writing, I tried not to let my essence soak into the text; however my personal motivation, as described in the first chapter, was alive and present throughout these months. This is a work that called for creativity, and maybe a touch of daring, which could only have

happened with the support of the institution that receives it - in this case, the Sustainability Institute - and the support and encouragement of my two mentors, Eve Annecke and Luke Metelerkamp.

I feel that along this journey, Eve has encouraged me to fly high, to pursue the subtleties beneath the surface, and her feedback always returned me to the essence of my work. Eve trusted me to dive deep inside the SI while leaving me completely free to propose and act for change, perhaps catalyzing a process that already had been incubated through the work of so many others before me, such as Tracy Ward or Denise Curi.

Luke Metelerkamp tried to keep me consistent. He could see and relate to the creative potential of the experience, but always kept me grounded. His feedback focused on the structure and scientific potential of the research. As a former student of the Master's programme, I received from Luke much constructive criticism that complemented the subtle direction from Eve.

When re-reading this work, I feel that I could have developed the Literature Review further and brought many other issues to the fore. I could have conducted more comprehensive research involving nutritional issues, for example, or comparing the diets of countries in the same stage of development as South Africa. As a Brazilian, I need very little science to tell that South Africa compares to my home country in regard to the increased consumption of meat. Just as the 'braai' seems to be a national religion, "churrasco" assumes this role in Brazil.

The collection of consumption data at the SI through the meticulous analysis of all items would have been impossible if I had not made the decision to hire an assistant. When I had to invest nearly three weeks of work to compile the data of a single month, I realized I could not invest another 15 weeks to complete the work. This decision was difficult and at the same time the work was vital for a more accurate perspective of this work.

I feel that my greatest "scientific" contribution, if there is any, is the fact that through the use of PAR I could demonstrate that simple actions, such as the cooking sessions and sharing meals, can bring back a little of what has been lost, according to the Patel statement (2012) at the beginning of this work. Evidence for that can be found in Chapter 4.1 through the statements of the staff during the cooking sessions and digestion session: food was a "vehicle for connecting people



and culture” - Katlee Mabeba, also “connecting as a family” - Sean Erasmus, in a “simple and feasible way” – Bryce Anderson.

Another contribution that is important to me relates to a few factors that often seem underrated: pleasure; joy; beauty. They were all part of the experience, and I wonder if the engagement would have been the same under “controlled” or “artificial laboratory” conditions for the cooking sessions. I also wonder if the result would be the same if each cooking session had been extremely strict about certain rules, such as in the choice of such ingredients, weighing, or a nutritional guideline or obligation imposed from the “top down”. The result of this I’ll never know, but I daresay that the experience would have been completely different.

Realising the complexity of the food system at the SI, I decided to leave a large opening for emergency. This is a feature that Cilliers (1998) describes as being part of a complex system and I had the opportunity to witness this up close. The creativity that emerged from the close contact between people who had never cooked together, resulted in an absolutely unique experience. How could I capture the aromas, flavours, or even the sound of smiling conversation in these lines?

Using PAR techniques was absolutely essential for me as I wanted to act, rather than simply observe, criticise and create a list of recommendations to be implemented. As already mentioned, the implementation of these recommendations is always a critical part of the work. It is there that the practice tests the theory. It is there where truths are built or destroyed. With that, I feel I took a big risk when I tried to do something I had never done before. But I was never afraid of the challenge ahead of me. Mistakes have always been part of my learning process.

### **5.3 Recommendations**

For me, recommendations are always easier said than done. The biggest challenge lies in their implementation. Nonetheless, this section provides recommendations for the future food system at the SI, which I hope to have enough time to directly assist in implementing, regardless of the results given to this thesis.

### 5.3.1 Focus on the kitchen

"We cannot lose sight of the importance of the kitchen. Hours spent in the kitchen and our time at the table are both critical investments in relocalizing food systems" (Ackerman-Leist, 2013).

As already mentioned, the SI has two major points of food processing: the Green Café and the kitchen located inside the guest house. The latter is the larger processor and provides much food for students, visitors and staff at the SI, as well as for the children who attend the aftercare and youth group, as described in Chapter 3.

A recent work made available by a "Chef de Cuisine" who became a celebrity, describes an event that lasted 98 days, involved 166 countries and 7,354 participants, and that aimed to increase the level of attention of children to food so they could make better choices (Oliver, 2014). From this proposal, several concepts coming from different parts of the world emerged, combining creativity, boldness and a large pinch of fun. The work of Jamie Oliver, I believe, inspired me to carry out activities with the staff at the guest house's kitchen, to increase their knowledge of ingredients and ways of cooking that will ultimately produce a greater variety of dishes being offered.

Another way to extend cooking knowledge could be through workshops with local chefs to bring inspiration in addition to new methodologies, with a focus on expanding the menu offered to all who eat at the SI. In 2014, a series of lectures related to food entitled Food Dialogues (Oranjezicht City Farm, 2014), took place in Cape Town every Monday night for eight weeks. One of the speakers spoke on the theme of local, indigenous ingredients: Loubie Rusch, founder of the initiative "Making Kos". Rusch has worked for the past 30 years discovering (or rediscovering) wild ingredients that can be eaten as food. Knowing and communicating the use and benefits of these ingredients in the kitchens at the SI could give a unique identity to the food served there.

Finally, the entire kitchen staff should participate in some way in the cultivation and harvesting of food grown in the gardens of Lynedoch. They should also be familiar with local small and micro farmers, for example, the Green Road (Green Road, 2014), as well as knowing the methods used to produce food. This would strengthen the web of local relationships, which ultimately increases the resilience

of a whole community (Schulschenk, 2010).

These recommendations must take into consideration that the taste for a specific kind of food might also be connected to the culture, and even more, to the background and experience of the cook. These issues must be addressed in a clear and transparent feedback loop that is explored in Section 5.3.5.

### **5.3.2 Optimise the flow of food**

From the detailed analysis of food items purchased by the SI team, it is clear that the vast majority of food items are bought from large supermarket chains or suppliers where the exact origin of food can be difficult to trace. The obvious and closest sources of food are the Lynedoch gardens (i.e. Gardens n Grounds). Since the participation of students and staff is compulsory in the gardens for a few hours a day, we could take advantage of this connection and make the gardens the priority source. The food in these gardens is cultivated in an organic and seasonal way.

In addition to the gardens of Lynedoch, there is also a network of small and micro producers connected to a cooperative whose primary point of distribution (Green Road, 2014) is less than four kilometres from the SI. This cooperative also produces a number of items such as potatoes, tomatoes, vegetables, and even rice and other items that are often bought in supermarkets by the SI team. What's more, the Spier farm located less than 1 km (Spier, 2014) from the SI produces food such as eggs and other animal products using biodynamic and organic techniques. Budget however, is suggested to be a problem, and evidence for this is that during the cooking sessions (i.e. with unlimited budget), the amount of ingredients coming from Green Road (Table 18) increased by 67.91% suggesting that with a bigger budget, choices could be different.

The entire list of ingredients (i.e. 100% of all the food ingredients used in the kitchen) bought in supermarkets may never fully be replaced with local versions, either because of the large amounts consumed daily by the kitchen, or technical barriers (i.e. processed ingredients such as oils, spices, salt or even coffee). However, focusing on these two sources (i.e. Lynedoch gardens and surrounding small farmers) should dictate the main ingredients used in the kitchen, and complementing these ingredients with supermarket items, not the opposite.

The convenience of the supermarket shelves where everything always seems to

be available (Patel, 2012), keeps consumers using a system that is not working. But choosing to consume products from a large retailer is choosing to support the whole broken system. A more sustainable choice for the SI would be to feed the local community by purchasing food from these neighbours, which could help to increase the resilience of a whole community while nurturing social capital, the environment and the local economy (Schulschenk, 2010).

Ideally, all food consumed and processed at the SI would be grown and harvested locally, which is more in line with the values held by the institution and also Lynedoch Ecovillage. Perhaps this ideal scenario is not yet possible and will remain a goal towards which the institution should focus its efforts. However, an important exercise would be to research the optimal flow of food, starting by mapping local production and production technologies. This work has been partially carried out by former students of the SI, namely Jess Schulschenk (Schulschenk, 2010) and Anri Landman (Landman, 2010) who believes that using this web of relationships is a more sustainable way of food production, and therefore more aligned with SI values.

After mapping, the next challenge would be to develop a menu for the guest house's kitchen based on the use of local products from this map. Therefore the food that is available will dictate the menu, rather than the other way around, which often ends up meaning that characteristics such as seasonality and sustainable production methods would most likely be ignored. In other words, we start with locally available ingredients, produced in line with the values of the SI, and then we create a menu. This seemingly simple but in fact complex and significant step could improve relationships between the kitchen staff and local producers, and draw attention to facts such as the impact of climate change on food production, and vice versa.

Another way to help optimise the flow throughout the SI's food system can come from a very simple step. With this work, we already have a breakdown of all items consumed as food at the SI over three months in 2013 and the comparative three months in 2014. Such lists could be provided to small cooperatives as the Green Road (Green Road, 2014) or Abalimi Bezekhaya (Abalimi Bezekhaya, 2014) or others who have similar characteristics. From these lists, the cooperatives could offer to meet the SI's consumption needs with their produce, thus replacing as many of the products purchased in large retailers as possible.

### **5.3.3 Continue the cooking sessions**

According to feedback received at the meeting on June 27, 2014 at the digestion session (described in Section 3.5.4) the cooking sessions conducted throughout this project increased the attention to food at the SI in a light and fun manner, allowing the opportunity for greater interaction between the SI staff and even their families. At the same time, the sessions provided the kitchen staff with new ideas and recipes, adding to the recommendation above about focusing on the kitchen.

The cooking sessions were concentrated across 70 days because of the short timeframe for this research, which resulted in them being almost a weekly event. Obviously, during these sessions, the team making the meal had to disconnect from their daily work activities. In order to respect the staff's work and not interfere too much in day-to-day routines, it makes sense to continue the sessions on a monthly basis. However, I believe it is important is to keep the atmosphere light and fun. Sessions must not become a burden or one more task on a list of obligations.

A bigger challenge could be setting up a sort of lottery to select local ingredients with which the team has to cook. This activity will certainly broaden the range of options offered by the kitchen at the SI because the whole team would be involved in the research and creation of that recipe based on local ingredients.

### **5.3.4 Establish indicators**

As we saw in Section 3.5.3, a simple way to measure the alignment of values encouraged by the SI with the food consumed and processed there could be through a point system. Although the indicator created for this work contains imperfections, it can undoubtedly be a starting point for measuring the sustainability of purchases and consumption at the SI.

In addition to this indicator, others could be created to measure, for instance, the amount of food waste at the institution, comparing it to world averages as seen in the work of the Institution of Mechanical Engineers (Institution of Mechanical Engineers, 2013), the work of Tristran Stuart (Stuart, 2009), and the food wastage footprint report of the FAO (FAO, 2013). Measuring the amount of food waste at the SI may have a variety of impacts: from better management of the entire chain of the SI's food system, to the choice of menus and ingredients, which could eventually result in a reduction of costs, and allow the investment of resources in

training, workshops, and other events proposed previously in this chapter.

As important as it is to have alignment between the values of the SI and the choices it makes with respect to the production and processing of food, food waste also has direct impact on the planet. Throwing food away is to also throw away all the inputs along the food chain that are necessary to produce it (Stuart, 2009).

Using indicators for food origin (as discussed in Section 3.5.3) along with these indicators for food waste could be two very important steps in giving a better overview of the system and improving management through informed decision-making.

### **5.3.5 Harvest feedback on food**

Hundreds of students attend postgraduate and Master's level courses at the SI every year from countries such as Nigeria, Kenya, Uganda, South Africa, United States, Netherlands, and South Korea, and who consume some of the food sold and/or processed at the SI, either a snack or lunch and sometimes dinner. We should make use of their perspectives, as they could provide valuable feedback to the kitchen.

Currently there is no feedback cycle established between children and teachers from the aftercare with the kitchen at the guest house. Perhaps as important as dealing with feedback about the taste and quality of the food, could be encouraging joint participation of these two teams (guest house and aftercare) and the children in activities related to the food they consume, whose immediate origin is the kitchen at guest house.

Constant feedback to the kitchen in the guest house seems to be a crucial factor in reviewing the services provided. If given with both lightness and assertiveness, this feedback can promote better clarity on training or equipment needs of the kitchen staff.

This feedback however, must come back and involve all the actors. Feedback forms are often distributed for the students from the PGD and MPhil programs, to be filled. Some students do fill them and the forms are taken back to the kitchen ending up with temporary "solutions" like "less spice", "more options". What was done with that information however is not always relayed to the person who filled

out the form, and this could generate some frustration.

If food is to be at the center of the discussions at the SI, or, in a similar way to Schumacher College where “the kitchen is the heart” – Juliana Schneider, the theme should be integrated from the beginning to the end. All actors must connect, engage, discuss and decide, and then the information must circulate to all, including those who first provided the feedback.

### **5.3.6 Create an identity for the food served at the SI**

The descriptions I heard recently about Schumacher College always came accompanied by descriptions of smells, tastes and sensations of the food produced there, whether remembering the amazing soups served in the winter or during the evenings, or the presentation of the dishes, or even the taste of the bread produced there (Metelerkamp, 2014; Curi, 2014).

This search for an identity for the SI’s food appears in the previous chapter, when the expression “sense of place” was listed as one of the most important ingredients for building a new food system at the SI that would bring together community and place-building around food. Food is usually associated with warm memories of childhood trips to different countries and places, or people with whom we share a table during a meal. At least for me, food is something ever present when I remember the best times I’ve experienced. However, I remember only a bit about the food I consumed at the SI despite being there nearly 18 months: maybe a vegetable stew seasoned with cinnamon that made me curious, or a simple omelette prepared with tomatoes and cheese at the Green Café, but nothing that brings back significant memories. I believe that the search for a food identity at an institution like the SI must include reference to some factors such as taste, variety of options, and presentation, but above all, I believe it should be evaluated by a factor extremely connected to themes addressed in the classrooms: its origin.

The menu served to students is displayed in a simple table, containing a brief description of the dishes - cooked vegetables, vegetarian bobotie, etc. However, there is no reference to the origins of the food or even to the story behind the dish. Bobotie is perhaps something common for a South African, but for a Brazilian like me, is something I had never heard of before and had no idea what to expect. The bobotie is a clear example of a type of dish that originated from a fusion of cultures and flavours (McCann, 2009), and has a diverse audience, often coming from

different parts of the world. What would happen if the bobotie offered by the SI came with a brief history of the dish as well as a description of the source of all their ingredients? For example, the mince comes from the Spier farm about 1.2 km away, from animals raised using biodynamic techniques; the cinnamon comes from a small company in Cape Town managed by the same family for about two generations; the lentils come from the Green Road project which encourages food production with organic techniques in small and micro urban farmers, often located in the townships. It would be interesting to see the impact of such a presentation: surely more students would eat the food at the SI? Though it would be difficult to predict the outcome, I believe that at an institution like the SI, the food that is served is also a kind of teacher.

### **5.3.7 Make food a cross-cutting theme**

As we have seen, the SI currently offers modules whose theme is agriculture or food systems. These modules, however, are not mandatory for students. When, for instance, a student chooses the renewable energy stream or specialisation students will only do modules connected to food if they want to opt for them, otherwise they will not have contact with this subject in more depth.

My suggestion is to try to include this theme within all modules offered in the institution. This can be done in a quite simple way. For example, early in the week when a module begins, a short presentation in class on the menu served at lunch could convey the message in a very light way, but gradually could become part of routine in all modules, so that over time food becomes central to the SI. Another way to raise the subject could be during the foundational and compulsory module on sustainable development, where one of the group work options could be to prepare a meal for the whole class using as many local, organic or biodynamic ingredients as possible. This would be a big challenge since the group would have to study the habits/allergies/religions of the whole class, thus bringing the cultural aspect of food to the presentation.

Making food one of the main topics in a module compulsory for all students is likely to produce an important learning experience for the whole classroom. This idea was experimented during February 2015 and it must continue.

The first and compulsory module “Sustainable Development” usually divides the class into small groups, and each group chooses a subject than can be



researched inside the village of Lynedoch. (i.e. water and sanitation, children, etc). This year, Mark Swilling, the lead facilitator of this module, allowed students to use the theme “food” as an experiential one. The group that chose food, besides exploring all the data and flows of food at the SI, had to plan a meal for the whole week according to the local harvest. This meal would be sponsored by the SI and given for free for the whole class during the five days. A daily menu was then planned according to the harvest in Lynedoch, which was in the middle of summer when tomatoes were abundant.

Five dishes with tomatoes as a base were chosen by the group of students, and the recipes given to the kitchen. Every day, before the meal was served, the students would explain what kind of ingredients were in the recipe, some cultural curiosity behind the dish (i.e. one day a Moroccan stew was served and the emphasis was on the spices used) and on Saturday the group presented the details of the food system at the SI with some practical experience working on it.

#### **5.3.8. Get to know the dark side**

This research is based in South Africa in the post-apartheid era, a country trying to move towards the “rainbow nation” as described by Nelson Mandela. The different ethnic groups still live in a very separated way, either by their cultures, financial circumstances, or both.

Lynedoch is compared to a miniature South Africa (Ringelberg, 2013), and these challenges are present here as well.

Those from different cultures and backgrounds may also have different perspectives about food when it comes to taste, nutrition and choices, and I do believe this is also an amazing opportunity for exchange as it was during the cooking sessions.

However, relationships seem to be broken at the SI as said by Tracy Ward (2014) and I do not believe that the food system can be fixed without fixing these relationships. I am not suggesting that these relationships are broken because of the apartheid era; I am suggesting that transparent relationships start with good and open conversations. Healing the relationships at the SI is the first step to healing the food system.

## 5.4 Opportunities for further research

This chapter describes future research opportunities to cover gaps, complement or continue this work.

### 1.. Indicators

As already described in the previous chapter, developing an indicator that takes into account the different elements of the food system such as a food's source, processing steps, and distance of displacement until the point of consumption, would be an important contribution not only to continuing the process at the SI, but to many communities experiencing or interested in going through a transition process.

It is important for the creators of this indicator (or indicators) to focus on those who feed them. An indicator managed by “ordinary people” of a food system, such as cooks or even farmers and other food producers, could serve to embrace the diversity of this chain. They must be simple and easy to use on a daily basis, on the ground and during the action.

### 2.. Food waste

As previously explained, the global data on food waste is somewhere between 30% and 50% of food produced on the planet (Stuart, 2009; Institution of Mechanical Engineers, 2013). Comparing this to the results of the indices within the SI will ultimately lead to the creation of new indicators (i.e. how much food is wasted at the SI), as mentioned above, in addition to enabling a comparative study. This could be further developed in the context of Stellenbosch through a survey of existing data (or even creating and researching local data) is also desirable.

### 3.. Comparative studies based on other communities and/or institutions

The Sustainability Institute is located within the first intentional community in South Africa. There are other communities around the world also created around shared human values, such as the celebrated community of Findhorn in northern Scotland (Findhorn Foundation, 2014), or the community of Auroville in India (Auroville, 2014). What is consumed in these communities, and where does the food come from? What is the amount of waste generated?

These are just some questions that may inspire a comparative study between Lynedoch and various intentional communities around the world. Perhaps this could be further developed to culminate in a global ecovillages cookbook. Attention must be paid to the different backgrounds and history since the contexts of Scotland and South Africa are likely to be completely different.

#### **4.. Monitoring the development of the theme at the SI**

As said before, I do not believe that a simple list of recommendations will solve the problem, and this includes my own list of recommendations. On the contrary, I reiterate that the greatest challenge lies in implementing these proposals. Thus, it could be interesting to follow the progress of the SI in the coming years regarding the evolution of its food system. With at least six months of market receipts fully indexed and digitalised into spreadsheets, any changes in the institution's purchases can be easily monitored through quantitative research.

If the researcher decides to use methods such as those utilised in this work, very creative proposals could be adopted in order to maintain actions of transformation in the SI community. Recently, the mayor of Brazil's São Paulo, the largest city in South America, launched a program aimed at all public schools in that city to address the fact that 30% of children there are overweight. Because most students attending the first year in public school eat the school's meals, the City Hall has just created an award for the schools that promote an appreciation of their cooks, involve the community in discussions about food, and/or that encourage the engagement of partners and competitors within the territory of the school (Portal Prefeitura de São Paulo, 2014). The school that has the best results in these three areas will receive a series of improvements to its campus, and those responsible for implementing the measures will receive as prizes workshops with chefs or learning trips to African countries. Initiatives such as this could be suitable for future PAR-based research on the food system at the SI.

### **5.5 A glimpse of the future**

The year is 2015. It is winter, and the rain falls on a cold day in Hout Bay, Cape Town. After this work of research and action, considerable progress was made by the SI. A food department has been officially created and it has at least four staff dedicated to projects connecting food and people. Luke Metelerkamp is the head of this new department. As part of the compulsory module on Sustainable Development in February 2015, a group of students planned the lunch menu for a

whole week based on the local harvest available, so that every student from the 2015 intake at least has had contact with the food theme. What happened was exactly as described previously in Section 5.3.7.

Some funding was raised for me to try and implement a Simunye Kitchen to connect the students, the youth, and the children of the crèche with the same seasonal meal every day. This challenge is way more difficult than anyone can anticipate, and we are not there yet. A whole menu for the month of June 2015 was planned with the participation of the leaders of each project that consume food from the kitchen (figure 5) and this was done in person (i.e. face to face conversation), with all of them sitting around the same table and having the harvest in Lynedoch and Eric Swart's farm (a micro farmer just across the road) as a starting point of discussion. The whole team agreed upon the fact that the recipes were a test and a few obstacles could come up during the whole process.

What happened next, however, was evidence of the broken relationships at the SI first exposed by Tracy Ward during the interviews (Ward, 2014). Because of a under-cooked potato recipe and the reaction from the kitchen after this feedback, everything crumbled and the Simunye Kitchen was temporarily abandoned and suspended (I personally call that moment: "the rise and fall of Simunye Kitchen"). The *idea* of the Simunye Kitchen is not at all abandoned, but someone must put energy into driving the process again, and this is what I plan to do once this thesis is submitted.

A few products were completely banned from the SI for many reasons, but mostly heavily processed items such as "non-stick spray" for baking are no longer available at the kitchen. Feedback from the students (PGD, Masters) is constantly harvested, although no official or written feedback from the crèche or the youth project is being done. The gardens in Lynedoch now have the help of a full-time permaculture and organic farmer to boost its production, with the aim of supplying the kitchen. Although it might be not enough, it is a step in the right direction of bringing food to the very centre of discussions at the SI.

This work of PAR (Barbera, 2008) was not capable of solving all the issues when it comes to food but together with other initiatives (i.e. the food department) helped to bring food to the center of discussions at the SI. However, there is still a long way to go on the road towards a sustainable food system.

In the very beginning of 2016, food comes back to the centre of discussions at the SI since a collective of two women (Miche Fabre-Lewin and Flora Gathorne-Hardy named Touchstone Collaborations <http://www.touchstonecollaborations.com/whoweare/>) was invited to interact with the SI students and staff through a series of events named “PULSE” intertwining art, food and place.

During lunch on the 10<sup>th</sup> of February 2016, Miche and Flora lead a process to serve the students from the 2016 PGD (Post Graduation Diploma), a meal that was as locally made as possible.

The effort to perform such a task however was far from being easy. The kitchen had two extra people to help the two resident cooks. Students were invited to participate in the harvest the day before and local farmer Neil Graham (Gardens n Grounds) was mobilized to help with last details. Flora and Miche were dedicated facilitators during the whole morning making sure that the food would be cooked to perfection, served in beautiful and decorated tables and the food waste taken to specific containers for further use in compost. Besides spices like salt, pepper and others and cooking oil, everything else was seasonal and local. Before serving the food, the story of the process was told to the public and cooks were invited for a round of applause.

It was not an ordinary day at the SI. It showed however that to serve local, seasonal and food that is connected to the place is a possible task, although, a lot of collective effort was involved.

## **5.6 The end is also the beginning**

I conclude this work by remembering the words of Mouton (1996) when he describes the fear we have of academic work as only being authored by those of superior intelligence. Having completed an academic work, I do not consider myself superior to anyone. On the contrary, I believe and accept the numerous shortcomings of this work as part of my own unique and authentic learning journey.

I chose the theme, form and method of this work freely. I was financed entirely by myself. No scholarship or bursary dictated the rules or directions of my work and no sponsorship inspired biases in my research, apart from those I already held through my experience and which I declared at the beginning of these chapters.

More than simply completing an academic work, I wished and still desire to act in a practical way to help transform the food system at the Sustainability Institute in South Africa. As an institution that, from my perspective, offers a different model of education, I believe the SI has a key role in developing the region, country, and world in which it operates.

To you, who spent some time reading this work, I leave my gratitude. I do believe that food is THE revolution. Through food we can perhaps at last reconnect people to one another and to the planet that is our home.

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## Appendices

Appendix 1: 2014 Prospectus Sustainable Development – Sustainability Institute

Appendix 2: Full Data Sheets – March to May 2013 and March to May 2014 – Food Receipts

Appendix 3: Examples of receipts analysed during the period of research

Appendix 4: List of semi-structured interviews

Appendix 5: List of all the food items purchased during the Cooking

Sessions

Appendix 6: The Sustainability Institute's cookbook

## Appendix 1: 2014 Prospectus Sustainable Development – Sustainability Institute



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### Master's Programme in Sustainable Development

## PROSPECTUS 2014

#### Specialisations:

Sustainable Development  
Sustainable Development Planning  
Sustainable Food Systems  
Renewable and Sustainable Energy  
Political Economy of Development

*A multi-disciplinary global programme in the planning, management and practice of sustainable development aimed at early and mid-career specialists and generalist professionals in the public, private and non-profit sectors*

Delivered by the School of Public Leadership in partnership with

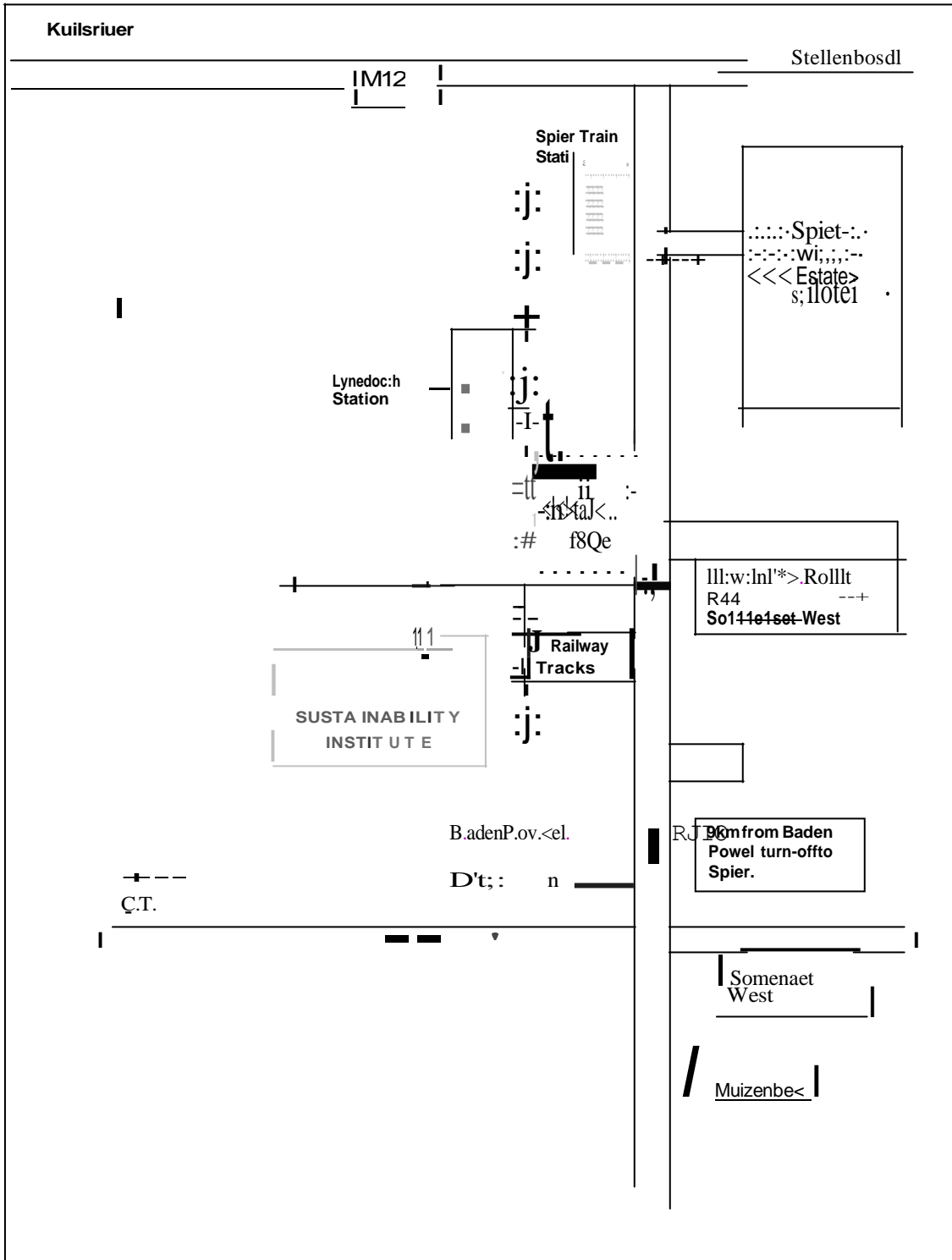
**Sustainability Institute**

**Centre for Renewable and Sustainable Energy Studies**

**Centre for Green Economy Transitions (currently known as TsamaHub)  
Stellenbosch University**

*Learning for Sustainable African Futures*





## AIMS

This structured transdisciplinary programme, with five available specialisations (streams), has been jointly designed and developed by the *School of Public Leadership* ([www.schoolofpublicleadership](http://www.schoolofpublicleadership)) and the *Sustainability Institute* ([www.sustainabilityinstitute.net](http://www.sustainabilityinstitute.net)).

The main aim of this taught, multi-disciplinary programme is to provide participants with an understanding and practical experience of the wide ranging contextual, conceptual and thematic issues involved in the planning, management and practice of sustainable development throughout the world. As the various global social and environmental crises deepen, a new generation is rising up into leadership positions in the public, private and non-profit sectors that are required to possess a broad trans-disciplinary understanding of the various dimensions of these crises and related solutions. This integrated Master's Programme (which comprises two connected formal degrees at the Honours and Masters level) aims to equip these people with the knowledge, experience and skills they will need if they are to grow and develop within this new field of career development. This will be done by combining the following:

- a Postgraduate Diploma in Sustainable Development (PGD) comprising a set of 8 core modules that will be taught from an international perspective by leading experts in their fields, followed by
- a Mphil in Sustainable Development comprising either an Integrated Thesis (with optional variations) plus two or four electives;
- a teaching methodology that combines formal teaching, case methods, facilitated discussion learning, and self-managed learning in a way that allows each participant to shape their own study focus;
- a residential living and learning context that is rooted in a functioning sustainably built and operated community that provides participants with opportunities for direct experiences of sustainable development work in the farming, construction, landscape, infrastructure and educational fields that will complement their respective learning programmes.

This programme of study comprises the following:

- **Postgraduate Diploma in Sustainable Development** (one year full-time\* or two years part-time\*), which is a 120 credit Honours-level qualification comprising a compulsory Orientation and eight modules that will be selected from the modules that are available. PGD graduates will have an automatic right to apply for registration for the MPhil if they obtain an average of at least 65% for each of the 8 modules.
- **MPhil in Sustainable Development** (one year full-time or two years part-time), worth 180 credits which comprises the following:
  - A research component (an academic thesis or various options including a Project Proposal or Academic Journal articles – more details below)
  - Research Methodology Course (5 days) (which takes place towards the end of the previous year).
  - Two or four electives

**All students (no matter what prior qualifications they may have at any level or with any other institution) are required to complete the PGD before starting the MPhil. Under no circumstances will any student be allowed direct entry into the MPhil without having completed the PGD. No other degree will be recognized as an entry requirement to the MPhil.**

\***Part-time:** This means that a student may complete 8 modules over two-years (e.g. 4 modules in the first year of registration and 4 modules in the second year of registration).

\***Full-time:** This means a student has to complete all 8 modules within 1 year.

**NB:** Full-time and part-time students must attend the full week (Monday–Saturday) of classes at the Sustainability Institute (Lynedoch Road, off R310) in Lynedoch, for each of the modules they choose. **Anyone who misses a half day or more for any reason will be asked to leave the course.**

**No distance education options are available** The PGD has a foundation module (Sustainable Development) that **everyone** must complete, plus five clusters of modules known as Specialisations. These Specialisations are as follows:

- Sustainable Development: foundation module plus 7 modules;
- Sustainable Development Planning: Sustainable Development, 5 Core Modules from the development planning Specialisation, plus 2 additional modules;
- Renewable and Sustainable Energy: Sustainable Development, 3 additional specified Core Modules delivered by the School of Public Leadership, plus 4 Core Modules from the Renewable and Sustainable Energy Specialisation, some which are delivered by the Engineering and Forestry faculties;
- Sustainable Food Systems: Sustainable Development, plus 5 compulsory Core modules and 2 modules selected from any of the specializations.

Students will graduate with two separate qualifications which can be separately reflected, namely a PGD in Sustainable Development, and an MPhil in Sustainable Development. The PGD is ideal for students who are only interested in the modules and have no interest in research. Students who complete the modules but want to complete the research component a few years later can exit with an Honours-level qualification (i.e. PGD) and then register for the MPhil whenever it suits them. Because the MPhil degree is defined as a research-based MPhil it is more highly rated in the national higher education system than a two year course work MPhil. In other words, not only do students graduate with two qualifications from this Programme, they also get a highly rated research-based Master's degree from the University of Stellenbosch which is one of South Africa's leading research Universities.

## ENTRY REQUIREMENTS

**Admission requirements for the PGD:** Candidates may submit written applications to enter this taught PGD Programme if they are in possession of one of the following qualifications:

- Any Bachelor's or BTech degree or a relevant four-year diploma with a 60% pass mark in one of the following major subjects: Town and Regional Planning, Housing, Geography and Environmental Studies, Social Sciences (sociology, politics, etc), Psychology, Economics, Public and Development Management, Geology, Botany, Zoology, Forestry, Ecology/Nature Conservation, Mathematics, Statistics, Agricultural Economics, Transport Economics, Forestry, Civil Engineering, Architecture, Land Surveying or **any other degree approved** by the Programme Committee. Relevant work experience will be considered for admission.
- Any three year diploma with at least five years relevant work experience and conformity with the University's RPL (Recognition of Prior Learning) policy. According to this policy, the equivalent of 120 credits at NQF level 6 (Bachelor's degree) must be offered in one or more of the following ways, subject to the decision of the Programme Committee, which consists of the Director of the School of Public Leadership, the Programme Coordinator and other relevant persons:
  - Completion with a total 65% mark of at least three modules from the PGD curriculum
  - Recognition of all the professional short , in-service training courses and completed subjects for another degree or diploma programme
  - Submission of a learning portfolio, with copies of written work
  - Passing of an entrance examination if so required by the Programme Coordinator

**Admission requirements for the MPhil:** Candidates may submit a written application to enter this Programme if they



comply with the following:

- PGD in Sustainable Development or have passed 8 core modules from the above mentioned PGD programme, but have not yet graduated.
- Preference will be given to applicants who have obtained an average of 65% or higher for each of the 8 modules of the PGD; **AND**
- A completed Research Concept Note and attendance of the compulsory Research Workshop.

If a candidate has obtained a Merit Certificate for one or more individual modules that were completed for non-degree purposes, the candidate may apply for the certificate(s) to be converted into credits towards the degree. The Programme Coordinator has sole discretion over whether or not to grant this request. S/he will take into account the performance of the candidate and the time that may have lapsed between the completion of the Certificate and the application to register for the degree.

### **Application**

- Closing date for PGD application: 31 August of the year prior to the year during which the programme commences. (Please note that all the supporting documents of your application must have reached Stellenbosch University by this date; i.e. you need to do the actual online application at least one week prior to 31 August.)
- Closing date for MPhil application: 30 September of the year prior to the year during which the programme commences.
- A detailed explanation of the application procedure can be found on page 25 of this Prospectus.
- Any other entry requirements for postgraduate study prescribed by the University of Stellenbosch in its various public documents will apply.

### **Selection**

- Selection will take place in October/November after which successful candidates will be informed. **Selected PGD students will be eligible to pay a non-refundable deposit fee of R2000 by 15 November of the year prior to the year in which they are taking up studies to confirm and secure their position on the programme.** This amount will be deducted from the registration fee payable in January of the year in which you are taking up studies. Failure to adhere to this will forfeit your position on this programme. If you do not arrive at registration for whatever reason or if you decide not to participate in the programme for whatever reason, this deposit fee will also be forfeited.
- The **criteria for selection** include academic excellence, work experience, an appropriate mix of disciplines, career commitment in the broad field of sustainable development and a well-written motivation.

## **COMPOSITION OF PROGRAMME**

The programme is presented formally during the scheduled contact sessions, with assignments completed during the interim periods between blocks. The Orientation, which commences with registration, is compulsory for all PGD students. Students who do not participate in the Orientation will not be permitted to register for any module. The module dates for 2013 can be accessed [here](#). **Please note that these dates may be subject to change.**

The Renewable and Sustainable Energy modules (delivered in partnership with the *Centre for Renewable and Sustainable Energy Studies*) are Core Modules for the RSE programme option but can be selected by any student on condition the rules for each specialisation/stream specified below are adhered to.

Each module will **as far as possible** be delivered at these fixed times. This means that a course participant can mix and match his/her participation to suit each person's practical circumstances. For example, it will be possible for someone to complete the entire course work programme for the PGD in one year (full-time) by attending eight core modules and completing the assignments **or** over 2 years (part-time) by attending 4 core modules per year and completing the assignments (or, for that matter, 5 modules one year and 3 modules the other year). Completing the PGD over three years will only be permitted under exceptional circumstances.

You have the choice of two options for your **MPhil**: (i) a 150 credit thesis plus two electives (worth 15 credits each); or (ii) a 120 credit thesis plus four electives (worth 15 credits each). Electives can be selected from existing modules offered as part of the PGD and MPhil, or from other courses offered by any Department in Stellenbosch University or another University.

As far as sequencing is concerned, the only course requirement is that all participants must do the Foundation Module (Sustainable Development I) before they enrol for any other module. No sequencing is applicable to any of the other sustainable development core modules (although we do make recommendations for certain combinations).<sup>1</sup> This will allow for the maximum possible flexibility for course participants.

It is recommended that participants who want to enrol for all the planning core modules follow the Foundation Module: *Sustainable Development I* with the planning modules in the following order: namely first *Introduction to Planning*, then followed consecutively by *Development Planning Theory and Practice*; *Development Planning Systems, Policy and Law*; *Development Planning and Environmental Analysis*; and *Applied Economics*. However, it is not compulsory to follow this order.

For the programme to be financially viable, a minimum number of 15 participants are required for each module. The preferred class size is 30 participants, but this may expand to as much as 55 for certain modules.

**Each module requires at least 150 hours of your time i.e. 50 hours class/contact time, 50 hours reading time, and 50 hours spent writing up the assignments.**

## PGD CURRICULUM:

The PGD curriculum comprises eight (8) Core Modules each worth fifteen (15) credits. The eight Core Modules must be selected as follows:

**The Foundation Module, *Sustainable Development I*, and a Orientation is compulsory and must be attended before participation in any of the other modules will be authorised.**

### *Sustainable Development Stream*

Students who require a general transdisciplinary understanding of global trends in sustainability thinking and sustainable development in particular are encouraged to select this stream. These students must select 8 modules from the following options. Each of these modules has a value of 15 credits:

#### *Compulsory module*

Foundation Module: Sustainable Development [Note: this is a two-week course]

The remaining seven modules must be selected from the following Core Modules and Energy-related modules:

Applied Economics

Biodiversity and Ecosystem Services  
Complexity Theory and Systems Thinking

Development Planning and Environmental Analysis  
Development Planning Systems, Law and Policy  
Development Planning Theory and Practice

Food Security & Globalised Agriculture  
Facilitation for Sustainability Transitions  
Ecological Design for Community  
Building Renewable Energy Finance

Governance, Globalisation and Civil  
Society Introduction to Development  
Planning Leadership and  
Environmental Ethics Regional Food  
Systems

Renewable Energy Policy  
Sustainable Cities  
Sustainable Enterprise

Systems & Technologies for Sustainable Agriculture

System Dynamics Modelling [Note: this is a two-week course]

A maximum of two modules can be selected from the following list of energy-related modules:

Renewable Energy  
Systems Bioenergy

Introduction to Solar  
Energy Wind & Hydro  
Energy

It is recommended that the Complexity Theory and Systems Thinking module is completed **before** the Leadership and Environmental Ethics, and that the Sustainable Cities module is completed **before** the Ecological Design module.

### **Political Economy of Development Stream**

Students interested in global trends in sustainability thinking with a particular focus on the political economy of economic development are encouraged to select this stream. These students must select 8 modules from the following options. Each of these modules has a value of 15 credits:

*Compulsory Module*

Foundation Module: Sustainable Development [Note: this is a two-week course]

*Compulsory Core Modules:*

Applied Economics

Development Planning Theory and Practice [Note: this module will be renamed Development Theory and Practice as from 2015 onwards]

Governance, Globalization and Civil Society

*The remaining four modules must be selected from the following Core Modules and Energy-related modules:*

*Choice of Core Modules:*

Biodiversity and Ecosystem Services

Complexity Theory and Systems Thinking  
Development Planning and Environmental Analysis  
Development Planning Systems, Law and Policy

Food Security & Globalised Agriculture  
(recommended) Facilitation for Sustainability  
Transitions

Ecological Design for Community  
Building Renewable Energy Finance

Introduction to Development Planning  
Leadership and Environmental  
Ethics Regional Food Systems

Renewable Energy Policy  
Sustainable Cities

Sustainable Enterprise (recommended)

Systems & Technologies for Sustainable Agriculture

System Dynamics Modelling [Note: this is a two-week course]

*A maximum of two modules can be selected from the following list of energy-related modules:*

Renewable Energy  
Systems Bioenergy

Introduction to Solar  
Energy Wind & Hydro  
Energy

**Sustainable Development Planning Stream**

Students who intend practicing in the applied disciplinary field of development planning and the allied built

environment sphere in South Africa<sup>2</sup> are advised to select this programme option. Students are required to complete certain compulsory modules, and to select additional modules from the list of core modules (8 modules in total). Each module has a 15 credit value.

**Important Note:** It is recommended (though not compulsory) that students first complete the “Introduction to Development Planning” module before attending the Development Planning Theory and Practice or Development Planning Systems, Law and Policy modules.

After completion of the PGD, students intending to eventually work as planners in SA are also advised to select the 120 credit option for the MPhil with 4 additional modules, as listed under the MPhil degree. The research component for the MPhil will also need to have a “Sustainable Development Planning” focus.

#### *Compulsory Module:*

Foundation Module: Sustainable Development

#### *Compulsory Core Modules:*

Introduction to Development Planning

Development Planning Theory and Practice [Note: renamed Development Theory and Practice as from 2015]  
Development Planning Systems, Law and Policy

Applied Economics

Development Planning & Environmental Analysis

*The remaining two modules for the PGD must be selected from the following Core Modules and Energy-related modules (although certain modules are highly recommended for the PGD or MPhil module option):*

#### *Choice of Core Modules:*

Biodiversity and Ecosystem Services

Complexity Theory and Systems Thinking -  
Recommended Ecological Design for Community Building  
- Recommended Renewable Energy Finance

Food Security and Globalised  
Agriculture Facilitation for Sustainability  
Transitions Leadership and  
Environmental Ethics Regional Food  
Systems

Renewable Energy Policy  
Sustainable Cities -  
Recommended Sustainable  
Enterprise

Globalisation, Governance and Civil Society  
Systems & Technologies for Sustainable Agriculture

## System Dynamics Modelling [Note: this is a two-week course]

*A maximum of two modules can be selected from the following list of energy-related modules:*

Renewable Energy  
Systems Bioenergy

Introduction to Solar  
Energy Wind & Hydro  
Energy

### **Sustainable Food Systems Stream**

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Students interested in the entire food chain stretching from primary production, to the consumption of food, through to food waste are encouraged to select this option. Students must complete the following 8 modules. Each module has a 15 credit value:

*Compulsory module:*

Foundation Module: Sustainable Development

*Compulsory Core Modules*

Food Security and Globalised Agriculture  
Leadership & Environmental Ethics

Systems & Technologies for Sustainable Agriculture  
Regional Food Systems

*The remaining four modules must be selected from the following Core Modules and Energy-related modules:*

*Choice of Core Modules:*

Applied Economics

Biodiversity and Ecosystem Services [recommended]  
Complexity Theory and Systems Thinking  
Development Planning and Environmental Analysis  
Development Planning Systems, Law and Policy  
Development Planning Theory and Practice  
Ecological Design for Community Building  
Facilitation for Sustainability Transitions

Renewable Energy Finance

Governance, Globalisation and Civil Society  
Introduction to Development Planning  
Leadership and Environmental Ethics  
Renewable Energy Policy

Sustainable Enterprise  
Sustainable Cities

System dynamics Modelling [Note: this is a two-week course]

*A maximum of two modules can be selected from the following list of energy related modules:*

Renewable Energy Systems  
Bioenergy

Introduction to Solar Energy  
Wind & Hydro Energy

Studying Sustainable Agriculture in India

Starting in 2013, students were offered the opportunity to do a module on sustainable agriculture in India. Subject to financial viability, this opportunity will be offered again in 2014 and beyond. The following options are available:

- PGD students must first do Systems and Technologies for Sustainable Agriculture I before they go to India – the course in India will be called Systems and Technologies for Sustainable Agriculture II and must be done as a 9<sup>th</sup> module that will be accredited as an elective in the MPhil rather than one of the require 8 modules for the PGD;
- MPhil students who want to take up the India study opportunity made do so irrespective of whether they have done the Systems and Technologies I module or not – they will be registered for a module called Advanced Studies in Sustainable Development.

Note: although the Regional Food Systems module will be delivered in 2014, it is not yet registered on the University system. Therefore, it will only be possible for students to get formal credit for this module in 2015. This means that PGD and MPhil students who intend being registered over two years can take this module. PGD students who are registered for one year but register the following year for the MPhil can take the Regional Food Systems module in 2014, but this will be counted as an elective for the MPhil in 2015.

### **Renewable and Sustainable Energy Stream**

This specialisation is offered in partnership with the Centre for Renewable and Sustainable Energy Studies at Stellenbosch University (see [www.sun.ac.za/crses](http://www.sun.ac.za/crses)). This Centre is a joint initiative by four Faculties of the University plus the Sustainability Institute, and the South African National Energy Research Institute (which is a subsidiary of the Government's Central Energy Fund). The teaching programme is jointly managed by the Department of Mechanical Engineering, School of Public Leadership and the Sustainability Institute. All modules will

take place at the Sustainability Institute or at the Engineering Faculty in the event that access to laboratories or experimental units is required. It is important to note that the Foundation Module plus the four modules from the Renewable and Sustainable Energy Specialisation (see below) are also the component modules of the Master's in Engineering specialising in Renewable and Sustainable Energy delivered by the Department of Mechanical Engineering. This means that students who enrol for the Renewable and Sustainable Energy Specialisation in the PGD/MPhil programme will be studying together with engineering students registered for the MEng degree. This will create a challenging learning environment that will prepare people for working across disciplines which is what will be required for those who pursue careers in the sustainable energy field. After completing the PGD, the research component for the MPhil will need to have a renewable and sustainable energy focus. All modules have a 15 credit value.

*Compulsory Module:*

Foundation Module: Sustainable Development

*Compulsory Core Modules:*

Ecological Design for Community  
Building Renewable Energy Finance

Renewable Energy  
Systems Renewable  
Energy Policy

*The remaining three modules must be selected from the following Core modules and Energy-related modules:*

*A maximum of two modules can be selected from the following list of energy related modules offered by the Engineering Faculty:*

Bioenergy

Introduction to Solar  
Energy Wind and Hydro  
Energy

*A maximum of three modules can be selected from the following list of Core Modules:*

Applied Economics

Biodiversity and Ecosystem Services  
Complexity Theory and Systems  
Thinking

Development Planning and Environmental Analysis  
Development Planning Systems, Law and Policy



Development Planning Theory and Practice

Food Security and Globalised Agriculture  
Facilitation for Sustainability  
Transitions Governance, Globalisation  
and Civil Society Introduction to  
Development Planning Leadership and  
Environmental Ethics Regional Food  
Systems

Sustainable Cities  
Sustainable  
Enterprise

Systems & Technologies for Sustainable Agriculture

System Dynamics Modelling [Note: this is a two-week course]

The normal combination for the Renewable and Sustainable Energy programme is the five Compulsory Modules, one or two Energy-related Modules plus one or two additional modules selected from the list of Core Modules.

## MODULE DESCRIPTIONS

### Sustainable Development (FOUNDATION MODULE)

**Aim:** This module will be the foundation stone of the entire programme. It will provide course participants with an overview of the most significant global environmental, social and economic challenges that face humankind, and an insight into the solutions suggested by the universal commitment to sustainable development. Course participants will be able to recognise, understand and apply the divergent interpretations of sustainable development that currently exist. The main themes will include:

- review of the most important environmental problems, such as climate change, waste and pollution, biodiversity destruction, and the general contradiction between resource use and carrying capacity;
- review of the most significant social challenges, including demographic change and expansion, pandemics, poverty, endemic violence, migration and urbanisation;
- review of the key global economic trends that currently determine and shape the dynamics of national and local economies;
- introduction to the history of, and different approaches to, the notion of sustainable development;
- case studies of sustainable development in practice at the policy and project levels.

Students who receive/d a bursary from the Centre for Renewable & Sustainable Energy may be required to choose energy related electives.

### Applied Economics

**Aim:** This module aims to introduce participants to the basic concepts of and insights into the crafty art and artistic craft of the orthodoxies and heterodoxies of economics in the theoretical and practical realms. The grain and texture of the course is admittedly coarse, connected to the breath/width of the module and its orientation towards the paradigms and practices of economic planning, generally, and development planning, more specifically. The elaboration – at different and linked spatial and institutional scales – of theories, policies, programmes, plans and other interventions to further the objectives and installation of pro-poor economic growth and distributional paths/trajectories/regimes constitutes the

foundation/anchor of this module. Given these parameters and scope, the module grapples with a multiplicity of development planning problematic spanning the role of the state (national, provincial and local) in and the interconnections between economic and human development, refracted through the lenses of poverty eradication, redistribution and socio-economic empowerment in and beyond market-conditioned/mediated formats. Hence, the module hones in on the developmental state in its national, regional and local manifestations and the form and materiality of its interventions/activities related to macroeconomic management, employment generation and industrial development, income and asset transfer programmes, human capability enhancement, regional and local economic and infrastructure development (and more). The following broad themes are dealt with in the module:

- Introduction to Economics: Orthodoxies and Heterodoxies
- The Role of the State in Economic Development: Historical Overview
- Macro-economic Policy and Reform: Evolution, International (Dis)/Consensus and the National Trajectory
- Economy, Employment and (In)Equality: Trade and Industrial Policy, Economy and Poverty
- Geography, Economy and Planning: National and Regional Planning, Local Economic Development
- Land, Property and Financial Markets
- The Economy and the Fiscus
- Growth Paths, the State and the Future

## **Biodiversity and Ecosystem Services**

This course will focus on the global dynamics of biodiversity and ecosystem resilience. Whereas climate change and resource depletion are two of the well-known concerns within the sustainability field, the scientific focus on biodiversity and ecosystems constitutes the third leg of sustainability science research. This module will help students understand critical ecosystem services such as freshwater, crop production, grazing, climate regulation that underpin the well-being of different societal groups in South Africa, and how these ecosystem services can be managed or restored to build resilience and support transitions in complex, interconnected social-ecological systems (SES). This will entail an analysis of which parameters influence feasible investments in restoration of ecosystems and their services, and the potential for green infrastructure to act as an alternative for physical man-made infrastructure. Particular attention will be paid to identifying possible tipping points that could trigger large, abrupt, nonlinear changes that threaten critical ecosystem services and hence the potential for structurally transforming the economy and alleviating poverty. Using the Inclusive Wealth framework students will be introduced to assessment methods that value key ecosystem services and the potential economic consequences of transgressing possible tipping points. The major types of SES in South Africa will be described and their ecological, social and economic sustainability assessed in order to identify key leverage points for transitioning to more sustainable SES. To balance out this economic perspective, students will also be introduced to deep ecology perspectives that value the non-quantifiable benefits of a reconnection to nature.

## **Bioenergy (Engineering module)**

The course will consider the practical and commercial application of the various technologies for biomass conversion into bio-energy. The production of first and second generation bio-fuels as well as other forms of renewable energy, such as electricity, will be covered, with an emphasis on the critical issues of thermal efficiency, sustainability and commercial feasibility. The following technologies for biomass conversion will be included:

- Bio-ethanol production, including substrate preparation, microbial conversion and separations
- Thermo-chemical conversions, including combustion, gasification and pyrolysis, and the use of these for green electricity production
- Biogas production, both from landfill sites, animal dung and waste water treatment
- Biodiesel production, including process basics, product purification and waste treatment

The selection of the most appropriate technology from the demand side perspective will be a central thread through the course.

## Complexity Theory and Systems Thinking

Aim: to provide students with a general introduction to a theoretical field that has emerged in recent decades from the natural sciences and which has since penetrated both the management sciences and more recently certain sections of the social sciences. As the new paradigm for rethinking the connection between natural and social systems within the wider context of sustainability, it is essential that course participants have mastered the basic concepts of this approach. Central themes will include:

- history of systems thinking, with special reference to the emergence of conceptions of complexity, chaos and dynamic self-organising systems;
- complexity, post-structuralism and the rethinking of science;
- the organising principles of all life forms;
- complexity and post-modernism;
- implications of complexity theory for an understanding of the relationship between natural and human systems;
- applications within the management and social sciences;
- complexity and sustainability.

## Development Planning and Environmental Analysis

Aim: this module will provide participants with an understanding of the links between science, knowledge, evidence-based policy and action for sustainability and the role of planning and environmental techniques, assessments and analyses in this process. An overview will be given on extracting, processing and presenting data; demographic and socio-economic, poverty and inequality assessments, environmental impact analysis (EIA), strategic environmental assessment (SEA), sustainability assessments and sustainability indicators. Cost-benefit analysis, multi-criteria decision analysis, transport, infrastructure, regional and urban economic analyses will also be addressed. The focus of the module will be on exploring new techniques for sustainability, of which the main themes are:

- knowledge- policy-action for sustainability;
- socio-economic analysis and profiling of communities for integrated development planning;
- social, poverty and inequality analyses, including participatory and action research;
- “pre-design” environmental analysis, “post-design” environmental impact assessment (EIA); strategic environmental analysis (SEA) and sustainability assessments;
- sustainability and ecological indicators, including the ecological footprint of a city, material flow analysis and alternative economic assessments.

## Development Planning Systems, Law and Policy

Aim: this module will provide participants with an understanding of the constitutional, legislative, policy and procedural dimensions of the South African planning system, linking to what is happening in the rest of Africa and the world. The module will focus on how to promote justice, human rights (Bill of Rights), equity and sustainability through law. This will include an understanding of the concepts of the developmental state, co-operative governance, the distribution of planning powers and obligations across the different spheres of government, environmental, land use, land reform, rural, urban and regional development legislation and policy, in order to analyse, critique and apply these frameworks. Central themes will include:

- planning, development and environmental management systems, both informal and formal, and their links to social systems

- making institutions, legislation and policy more responsive to poor people and the application of human rights and other normative approaches, such as environmental justice, the just city, deliberative democracy, and what constitutes citizenship
- the role of a developmental government and local authority and criteria to assess the success of their integrated development planning in promoting sustainability (both the products and the process)
- planning systems for sustainable development, linking land use, transport, squatting, housing and environmental law
- criteria for analysing constitutional, legislative and policy frameworks.

## **Development Planning Theory and Practice**

This module will provide a brief introduction to mainstream and heterodox economics; the complex relationship between ideology, money and social power; the politics, economics and sociology of policy reform, state-building and developmental statecraft. To unpack this, this module introduces students to mainstream theories of development; crisis of/in development thinking; poverty-inequality-power nexus (refracted through race, class, gender, food, knowledge, culture); state and development (centrality of class in critical development studies, politics of Empire, politics of development); compressed development and different pathways to growth (orthodox and heterodox explanations of development in diverse countries (including China, India, Brazil, Botswana, Mauritius, S-E Asia); Africa and the World Economy (aid, trade, debt, growth).

**[Note: this module will be renamed Development Theory and Practice as from 2015 onwards]**

## Ecological Design for Community Building

Aim: to enable module participants to describe, analyse, critically evaluate and apply the range of emerging techniques for designing and implementing sustainable communities. Central themes will include:

- overview of different conceptions of ecological design;
- implications of global agreements and policies for the design professions;
- review of the main international standards (e.g. ISO);
- trends in ecological urban design (“green urbanism”);
- trends towards “green architecture”;
- “zero waste” perspectives on sanitation and solid waste management;
- sustainable engineering solutions for energy alternatives (solar, wind, hydrogen) and car-dominated transportation systems;
- sustainable food and water supplies for local communities, towns and cities;
- decision-support systems for analysing and selecting building materials.

## Facilitation for Sustainability Transitions

During this course, we will explore the possibilities inherent in having, and facilitating, conversations that matter to us. We will look at facilitation as the conscious use of process, substance, and space. From a process perspective, we will look at some theories of dialogue and facilitation, some ways of thinking about group process and different kinds of dialogue. Participants will have opportunities to engage in facilitated group conversation, and to experience themselves more consciously in this process. The substance of the conversations will be evoked, in part, by living case studies that speak of some of the complex socio-ecological realities we live in. Participants will also bring to the course the issues that they are grappling with and about which they want to initiate conversation in their own contexts. Lastly, we will look at the question of space; choices about the physical places in which to host dialogue and how those relate to nature and the outdoors, spatial arrangements in those spaces, as well as more metaphorical aspects of internal spaciousness in the facilitation role and the idea of boundaries. How can we support a group to find both its yes and its no, in ways that will generate more clarity and potentially galvanize action? How can we as facilitators find both our yes and our no and use these skilfully in the groups we work with?

## Food Security and Globalised Agriculture

Course participants will be required to describe, analyse and critically evaluate the different options for ensuring food security from a sustainable development perspective, within a globalised food system.

Central themes will include:

- Overview of Globalised Food Systems
- South African Agriculture within Global Food Systems
- Food Security – global status, varying policy responses and debates
- Nutritional Security
- Responses to Globalised Food Systems – effect on the poor and marginalised, including groups responding (Via Campesino, Slow Food, Fair Trade, Landless People’s Movements)

- Debate on the Impact of Genetically Modified Crops on Food Security
- Urban Food Security in South Africa and Africa
- The Alliance for a Green Revolution in Africa: undermining food security?

## **Governance, Globalisation and Civil Society**

Aim: to provide module participants with an understanding of the changing modes of governance at the local, national and international levels within a context characterised by globalised information-based economic dynamics, the rise of civil society and the challenge of sustainable development. The main themes will be:

- changing conceptions of governance over the last century (social democracy, liberal, statist, corporatist and now green);
- review of the institutional structures of global governance;
- the rise of local governance and local economies;
- the rise of civil society at the local and global levels;
- the implications of sustainable development for governance at the global, regional, national and local levels;
- case studies of “green states”.

## **Introduction to Development Planning**

Aim: this introductory planning module provides participants with an introductory overview of the developing field of trans-disciplinary and integrated development planning to promote sustainability. This includes an examination of the international, African and South African planning context, and the introduction of new planning language, procedures, techniques and tools that are being used in the management of the built environment, environment, social, economic and institutional development. The course will also give an overview of substantive, procedural and normative theoretical planning models, and ethical dilemmas in professional practice. Main themes are:

- An introduction to sustainable development and planning concepts and language, concepts such as social capital, social-ecological systems and resilience, sustainable livelihoods, capabilities, right-based development and planning
- planning within a globalised world and the role of markets versus the role of states, as well as the limits of planning
- planning as ‘the official story’ versus ‘insurgent planning’ and an overview of various models and typologies of planning (rational, comprehensive, incremental, mixed scanning, implementation-orientated, strategic, advocacy, transactive/ social learning, equity, critical pragmatist, Marxist, radical, communicative/ collaborative)
- the role of informality and participation in planning and development, processes; social learning, and conflict transformation
- the role of spatial planning within an integrated planning process, regional and rural planning and the planning of sustainable human settlements
- planning tools and instruments for dealing with complex and ‘wicked’ problems such as urbanisation, migration, poverty, social exclusion, inequity, inequitable and inefficient urban form and degradation of the built and natural environment (such as the South African Integrated Development Planning concept, Local Agenda 21 planning and City Development Strategies).

## **Introduction to Solar Energy (Engineering module)**

The course consists of a study of both Photovoltaics (PV) and Solar-thermal technologies for generating electricity from sunlight. The principles, manufacturing technologies, efficiencies, advantages and limitations of various PV cells will be

considered. The students should be able to design a manufacturing plant as well as practical installations of various PV components in a cost effective way. The main themes will include:

- principles of operation of PV cells;
- manufacturing technologies of crystalline and thin film PV cells;
- balance of system (BOS): regulators, inverters and storage;
- design of standalone PV systems;
- design of roof mounted grid connected PV systems;
- design of large MW PV systems;
- concentrators: combined heat and power generation (CHP).

The different solar-thermal systems will be introduced with the basic heat transfer and thermodynamics principles that apply. Both bulk electricity generation and smaller stand alone systems will be covered. The main themes will include:

- theory of mirror reflection and concentration of sunlight;
- absorption of concentrated sunlight: selective absorbers;
- generation of electricity: Stirling and Rankine heat cycles;
- combined heat and power generation (CHP);
- energy storage: heat and other technologies.

## Leadership and Environmental Ethics

Aim: to enable module participants to develop leadership capabilities that are premised on the capacity to recognise, describe, analyse and apply the different ethical models and value systems that underpin socioecological action. Central themes will include:

- the underlying ethical value systems of different leadership approaches;
- philosophical models for conceptualising environmental problems and the related approaches to environmental ethics – and why understanding these enables pragmatic action in conflicts in and around sustainable solutions
- relationship between environmental and social ethics, e.g. economic efficiency, freedom, equality and justice;
- models of, and approaches to, leadership within society and human organisations;
- the ethics of sustainability and process-oriented leadership;
- complexity, ethics and leadership;
- creativity, spirituality and personal unfolding;
- case studies and exercises

## Regional Food Systems

The food we eat is dependent on the functioning of a particular food system. This system is changing because of the impacts and consequences of converging and mutually reinforcing transitions coupled with the impacts of globalisation. This module will address these challenges and review new ways of understanding and engaging in the food system.

Traditionally, strategic food system planning and responses have generally been located at the national scale, focussing on policy and net production, or at the household scale, where welfarist responses dominate. An alternative scale of analysis and action is required that focusses on the regional scale. This module critically considers a variety of nascent regional food system concepts, responses and theoretical perspectives. These include, but are not limited to, regionalism and localisation, urban and peri-urban agriculture, regional food security, food sovereignty, pluralistic food

governance, food deserts, supermarketisation and alternative regional food movements.

Much of the regional food system discourse has emerged in the Global North and concepts are often uncritically transferred to, and at times imposed on, the Global South. This module challenges this approach by exploring approaches more appropriate to Southern responses to these global food system trends.

**[Note: this course replaces the existing course entitled Policy and Legal Framework for Rural Development and the Agricultural Sector. However, it will only be official approved by the University during 2014 which means students will only get credit for this course in 2015. Students interested in doing the Regional Food Systems course in 2014 can do so, but the credit will only be reflected on their records in 2015. However, if a student wants to do Regional Food Systems and graduate in 2014, this will still be possible but s/he will be registered for the Policy & Legal Framework module i.e. Regional Food Systems will not appear on his/her academic record.]**

## Renewable Energy Finance

The global drivers of decoupling economic growth and addressing climate change have seen much emphasis placed on the development of renewable energy projects. This module enables participants to understand the parameters that influence the financial aspects and project design of renewable energy initiatives in Africa. The participant will get to be familiar with a range of instruments, the financial structuring tools needed to attract investors, and how to use alternative financial sources, like carbon finance, outside of the commercial financial institutions to ensure the financial viability of renewable energy projects. The module therefore aims to empower professionals to incorporate appropriate financing into their decision-making pertaining to renewable energy projects. This includes:

- The basic financial metrics such as IRR, NPV and DSCR,
- Understanding the economic justification and impact of renewable energy projects,
- Understanding of what sustainability drivers have an effect on the renewable energy business,
- Understanding what barriers exist to renewable energy project implementation from a financial perspective, and
- Understanding what opportunities exist to facilitate renewable energy implementation.

The module is mainly aimed at sensitising participants to qualitative issues in renewable energy projects, but also enables participants to deal with quantitative measures.



## Renewable Energy Policy

Aim: To provide participants with an overview of the policy context, which must be understood as the regulatory, institutional and market setting for renewable energy technologies (RETs). To understand the policy context the sustainability of RETs, from the perspectives of policy-makers and other stakeholders, must be understood. The module is subsequently designed to address the following questions:

- What do sustainable RETs mean?
- How can sustainable RETs be assessed, identified and prioritised?
- How may appropriate RETs be managed as sustainable energy value chains in Africa?
- What tools can be used to promote appropriate and sustainable RETs?

## Renewable Energy Systems (Engineering module)

The course will give the students a thorough understanding of the basic concepts of energy, power, mechanical work and heat. They will be able to evaluate the practical possibilities and limitations of renewable energies and compare it with conventional carbon based energy systems. The present energy resources and demands of the world will be analysed and renewable energy scenarios that are technologically feasible and economically viable for the future will be investigated. The main themes will include:

- concepts of energy, power, work and heat;
- efficient conversions of different forms of energy into other useful forms;
- basic principles of thermodynamics and electricity as applied in the use of energy;
- resources, technology and viability of renewable energies: Geothermal, Hydro, Waves, Oceanic, Wind and Biomass;
- Solar Energy: solar water heating, principles and technologies of photovoltaic cells (PV) and solar-thermal generation of electricity;
- future technologies: hydrogen economy, fuel cells;
- energy statistics: resources and demands of energy in the world; future renewable energy scenarios.

## Sustainable Enterprise

Under the rubric of Sustainable Enterprise or related terms, such as corporate social responsibility (CSR), corporations are facing increasing pressures to contribute to sustainable development, and many of them are trying to respond. This module will investigate the motives and manifestations of Sustainable Enterprise, with special emphasis on developing country contexts, particularly South Africa. An overarching question is whether Sustainable Enterprise reflects a genuine shift in attitudes and behaviour, or is it a veil for business as usual? Key themes include the following:

- Defining Sustainable Enterprise
- Drivers for Sustainable Enterprise and the corporate response
- The challenge and complexity of implementing Sustainable Enterprise
- Sustainable Enterprise as discourse and controversy
- Partnerships and critical collaboration
- Social entrepreneurship
- Is Sustainable Enterprise making a difference?

- The future of Sustainable Enterprise

## **Sustainable Cities**

Aim: to provide module participants with a general and comparative understanding of the combined economic, social and environmental impact of the following three trends: the expansion of the world population to at least 9 billion people over the next 20 years, the transition to a predominantly urban world by 2050, and the negative environmental impact of urban systems that have yet to be re-designed in line with the principles of sustainable development. Given that the majority of the world's largest cities will be in the developing world, it is these cities that will be the core focus of this course. Course participants will be required to critically evaluate and analyse current trends, and test and apply a range of policy alternatives.

Central themes will include:

- comparative history of the city across the developed and developing world;
- current urban trends, including urbanisation, urban poverty, urban economic trends and local governance;
- the challenge of unsustainable urban systems for food supplies, waste, energy, water and CO2 emissions;
- the social dynamics of cities, with special reference to African cities;
- globalisation and the changing role of cities in the global economy;
- policy prescriptions for urban problems from the main international institutions (World Bank Group, IMF and United Nations);
- case studies of sustainable development in practice.

## **System Dynamics Modelling**

Aim: to provide participants with an appropriate way of visualising the complex interrelationships between various parts of real-world problems; problems that continually change over time and are resistant to corrective action. The module therefore provides a solid foundation for developing strategies and managing problems for which conventional reductionist ways of thinking are ineffective. The module is subsequently designed to provide the understanding of the following:

- What is system dynamics and why use it?
- What are the modelling approach / processes?
- What are the basic feedback structures?
- How does one develop a system dynamics model?

Therefore, this module introduces the concepts of system dynamics modelling, including the modelling process, fundamental modes of dynamic behaviour, and the stock-flow-feedback structures that generate them, system mapping tools, and modelling human behaviour. Emphasis will be on examples from the energy and water sectors, and aquaculture management, but students have the opportunity to engage with their own real-world problems.

## **Systems & Technologies for Sustainable Agriculture I**

Aim: Participants will understand the principles of these alternative farming systems and be able to apply them to different crop and animal production systems through case study teaching. Students will learn about crop and animal production using the inputs of soil, water, energy, labour and capital (assets) in a sustainable way that includes local environmental conditions, economic considerations and social networks.

Systems and Technologies for Sustainable Agriculture II will deepen the understanding developed in Systems and Technologies I by way of a course that gets delivered in India in partnership with an NGO called Dharmitra. Led by Professor Tarak Kate, this course will provide students with a direct and hands-on experience of sustainable agriculture practices in Maharashtra State, India.

## Wind and Hydro Energy (Engineering module)

This module deals with the harvesting of energy from the motion of air and water. The different types of machines applicable to wind, waves, tides and currents will be introduced. Identification of suitable zones and locations of such systems in Southern Africa. The main elements of the course are listed below.

- General introduction: Basic fluid dynamic principles in the context of wind and hydro engineering.
- Wind power: Introduction, cost and growth. Wind energy: Wind variability and turbine power. Turbine types, scale and siting. Basic wind turbine theory. Debate for and against wind power: pollution, long term potential, intermittency, feasibility, aesthetics.
- Basic wave generation theory. State of the art methods, floating and submerged. Debate for and against wave power: ecology, long term potential, feasibility, aesthetics.
- Basic consideration of other ocean related power generation systems: currents and tides. Combined systems.

- 

## MPHIL CURRICULUM

After completing the eight Core Modules and graduating with a PGD qualification, the student must apply to register for the MPhil, and also submit a research concept note. Registration will only be possible after attending the Research Workshop in November and if an adequate Research Proposal has been completed and accepted. The Research Proposal must comply with the prescribed format and must also define which of the options below will be selected.

Both options 1 and 2 below make provision for electives. An elective is any module delivered as part of the PGD programme, or any module delivered by other degree programmes in the School of Public Leadership, or any other module delivered by any other Departments at Stellenbosch University, or a module delivered by another institution (subject to approval by the Programme Coordinator). If a student selects a module that is not part of the PGD programme, to facilitate the participation by the student in this module the student will be registered for a general module called *Advanced Studies in Sustainable Development*. (For example, if a student wants to do a module in Land Studies or Physics at Stellenbosch University or elsewhere, the student will be registered for a module called *Advanced Studies in Sustainable Development*.)

Two further electives are offered as part of the Master's Programme in Sustainable Development, i.e. *Research Methodology* and *Research Dissemination*. Research Methodology is a module that takes place in November where students seeking admission to the MPhil submit and present proposals. These are formally evaluated and marked. The Research Dissemination module takes place at the end of the MPhil and is an opportunity for MPhil students to convert their research into a publishable paper.

After completion of the PGD, students wishing to complete the Sustainable Development Planning specialisation (in order to work as planners in SA<sup>3</sup>), are advised to select the 120 credit thesis plus 4 electives option. It is recommended that these 4 additional modules are selected from the Sustainable Development Planning Stream of the PGD; or from the MPhil Environmental Management or HonsPA or MPA programmes delivered by SPL; or from the Masters of Urban and Regional Planning (MURP) or the MPhil in Urban and Regional Science offered by the Centre of Regional and Urban Innovation and Statistical Exploration (CRUISE) which is part of the Geography and Environmental Studies Department in the Faculty of Arts. Besides the PGD modules listed earlier, other specific electives that are recommended are *Geographical Information Systems in Environmental Analysis and Management (or a similar GIS module)*, *Project Management (SPL)* and *Urban Management Processes (CRUISE)*. The research component for the MPhil will also need to have a "Sustainable Development Planning" focus.

The School of Public Leadership offers two project management courses: a basic course called *Project Management* and an advanced course called *Advanced Project Management*. Both of these courses can be selected as electives and will be accredited under these titles.

**Note:** the page numbers below are based on a letter size of 12 and line spacing of 1½ (with about 375 words per page). Double line spacing (about 250 words per page) will lead to a longer thesis.

### **Option 1**

Research component plus Two Electives Programme: a 150 credit research component (see options below) plus two electives worth 15 credits each selected from the modules on offer in the PGD programme or from any other Programme at the University of Stellenbosch or other learning institution on condition these have been approved by the Programme Coordinator. The Programme will consist of the following:

- Research Methodology Course, **plus**
- Two Electives: 15 Credits each plus
- Research Component: 150 Credits with the following options:
  - i. Two academic journal articles in the format and style of the School of Public Leadership template and in accordance with the requirements of the University, the School and the supervisor (±8000 words [±24 pages] per journal article).

#### **OR**

- ii. A project proposal for a given development project that must define the goal, objectives, implementation plan, budget, and monitoring and evaluation mechanism in accordance with the Logical Framework Analysis project management approach (±40 000 words [±120 pages]).

#### **OR**

- iii. A traditional thesis in accordance with the normal academic format and requirements of the University, the School and the supervisor (±40 000 words [±120 pages]).

### **Option 2**

1. Research component plus Four Electives Programme: a 120 credit research component (see options below) plus four electives worth 15 credits each selected from the modules on offer in the PGD programme or from any other Programme at the University of Stellenbosch or other learning institution on condition these have been approved by the Programme Coordinator. The Programme will consist of the following:

- Research Methodology Course, **plus**
- Four Electives: 15 Credits each plus
- Research Component: 120 Credits with the following options:

- i. Two academic journal articles in the format and style as prescribed by the School of Public Leadership template and in accordance with the requirements of the University, the School and the supervisor (±8000 words [±24 pages]).

#### **OR**

- ii. A Project Proposal for a given development project that must define the goal, objectives, implementation plan, budget, and monitoring and evaluation mechanism in accordance with the Local Framework Analysis project management approach ( $\pm 30000$  words [ $\pm 90$  pages]).

### **OR**

- iii. A traditional thesis in accordance with the normal academic format and requirements of the University, the School and the supervisor ( $\pm 30000$  words [ $\pm 90$  pages])

- **Scheduling:** Candidates must submit a research proposal, written in accordance with the Departmental Guidelines for Research Proposals and acceptable to the Programme Coordinator and the Research Committee, by mid-December; for registration end February.
- **Supervision:** The Research Committee will assign a Supervisor for each candidate in accordance with available expertise and equitable distribution of the supervision load, plus two Examiners.

## **GENERAL ARRANGEMENTS**

### **Module Completion**

All candidates must attend and complete the Foundation Module: *Sustainable Development I* before proceeding to register for any other module. Candidates wanting to follow the 'Development Planning Theory and Practice' and 'Development Planning Systems, Law and Policy' modules are highly recommended to only do it after completion of the 'Introduction to Development Planning' module. Otherwise, candidates can structure the sequencing of their Module selections to suit their own practical circumstances and intellectual preferences. Each candidate must make his/her own arrangements with respect to electives. The Programme Director and supervisors will be available for advice and on request; the Sustainability Institute will actively suggest viable options.

Students will be required at the start of the programme to commit to participating in certain modules at certain times. If a student changes his/her plans by deciding to register for a Module that s/he did not sign up for at the start, and if the Module s/he has applied for is full, then s/he will be put onto a waiting list. Non-attendance of modules for which students have registered will result in failure of a module. A student will then have to re-register and pay for the module in the subsequent year.

Candidates who fall into arrears with their payments for modules will not be allowed to register the following year and their final marks will be withheld until payment has been received.

### **Approach and Methods of Tuition**

During formal one week block sessions, an interactive teaching method will be used that will consist of formal lecturing, facilitated discussion learning, case method learning (in small group discussion and in plenary) and various kinds of structured group work. The main aim of this teaching approach is to ensure that members of the group learn from each other and establish strong working relationships. The facilitated discussion learning and case learning is designed to ensure that participants complement reading and listening with experiential learning that builds the capacity for sound judgement and practical wisdom. In addition, course participants will be required to undertake certain daily practical tasks related to the general upkeep of the Institute and the development of the surrounding projects. These shared experiences of practical work will feed directly into the overall learning experience during the block sessions.

The normal teaching day (Tuesdays to Fridays) will start at 08:00 with an hour of community work, followed by a formal teaching session until lunch time. Mondays will start at 08:30. Between 14:00 and 16:00, group work takes place, normally in preparation for group presentations on Saturday morning. There is normally a late afternoon session from 16:00 to 17:30. Overnight reading preparation is expected. All these components of the day, including the community work session, are accredited elements of the course and therefore attendance is mandatory for those who require accreditation either for their PGD, MPhil or as Executive Candidates.

Between block sessions, course participants who return to their places of work will need to work largely on their own and connected to others via email and Moodle where this is practically possible. However, others may choose to stay on at the Institute where they may work in groups or work with Institute staff on various projects. In both cases, however, it should be assumed that approximately 100 hours of self-managed work time will be needed between blocks for reading and writing up of assignments.

### **Language of Instruction**

The language of instruction during tuition, discussions and presentations will be in English.

### **Examination Requirements and Evaluation**

This structured study programme consists of separate modules. Written theoretical, practical and oral examinations may be required in the respective modules. The final mark for each module will be based on an assessment of classroom performance and written work.



The following requirements apply:

- a module pass mark is 50% on condition that the mark for the individual assignments is 50% or more
- a module distinction pass mark is 75%
- the pass mark for the Research Component is 50%
- the pass mark for the programme is a 50% average for all the modules combined plus a 50% pass mark for each of the eight (8) core modules
- the programme distinction pass mark (*cum laude*) is a 75% average for all the core modules combined.

If a candidate fails a module, s/he will be required to do one or both of the following: (a) repeat the Module and pay anew in full for the module, and/or (b) resubmit the written assignment by a certain date. The Programme Coordinator has sole discretion as to which remedial action will apply.

## COURSE FEES \*\*

**Course fees for 2014 (all course Readers and prescribed learning material are included in this fee)**

### PGD:

R4234 per module (School of Public Leadership)\*

- Full-time study:  $R4234 \times 8 = R33872$
- Part-time study:  $R4234 \times 4 = R16936$  for 2014 + ( $R16936 + 10\%$  increase) for 2015.

\*Fees for modules offered by the Dept. of Engineering may be higher/lower than those offered by the School of Public Leadership

### MPhil:

150 credit thesis  $R16200 + 2$  modules @  $R4234/\text{module} = R24668$

120 credit thesis  $R12960 + 4$  modules @  $R4234/\text{module} = R29896$

\*\*MPhil students must also take into account that their thesis document must be edited before final submission. Depending on the type of editing needed, fees vary from R1800 (form edit) to  $\pm R10000$  (content edit). Editing fees are not included in the course fees.

*These course fees are provisional amounts for budgeting purposes only and not binding on Stellenbosch University or any of its employees/representatives. Accommodation and meals are not included in the course fees.*

All *international students* who are in South Africa on a study permit pay the following *additional* fees which may increase in 2014:

- **SADC students including Namibian:** International registration fee (R2770) + service fee (R5360)
- **Non-SADC students:** International registration fee (R5180) + service fee (R5360)

Please contact the International Office, [interoff@sun.ac.za](mailto:interoff@sun.ac.za), tel. +27 21 808 2565 for more information.

### **University of Stellenbosch banking details:**

Name: Stellenbosch University  
Bank: ABSA  
Branch code: 632005  
Account no.: 041 020 4789  
Reference: Your student number  
Swift code: ABSAZAJCCT

MPhil studies: 30% of the thesis fees will be charged for the second year of study; and full thesis fees will be charged for every year of study after the second year. However, continuation after two years is not a given fact but is a privilege that is only granted under exceptional circumstances.

Students will be charged for (a) modules that they repeat; (b) additional modules over and above the 8 core modules; and (c) any additional fees that their electives may entail.

**The University, as represented by the duly authorised decision-making body, reserves the right to amend all fees payable to the University.** As a result, the above quoted fees may change by the time that registration takes place in January 2014. The School of Public Leadership and the staff associated with the management of this programme cannot be held accountable if for any reason the above quoted fees are changed by a duly authorised University decision-making body.

### **Fees payable by registration date:**

- South African students and international students not on a study permit are required to pay the registration fee (first instalment on class fees) before registration. The deposit amount (R2000) will be deducted from the registration fee.

•**International students on a study permit are required to pay all academic fees, international registration fees and service fees** upfront before registration. The deposit amount (R2000) will be deducted from these fees.

## FINANCIAL AID

Information on financial aid can be found on the [web page](#) of the Postgraduate & International Office: <http://www0.sun.ac.za/international/postgraduate-student-funding>.

## INTERNATIONAL STUDENTS

Information on visas, fees, language requirements and long term accommodation can be found on the website of the Postgraduate & International Office; [www.sun.ac.za/international](http://www.sun.ac.za/international).

## ACCOMMODATION AT THE SUSTAINABILITY INSTITUTE

Drie Gewels Guesthouse is a renovated 1914 historic building – a core part of the Lynedoch EcoVillage. It has been donated to the Sustainability Institute by Spier, contributing to residential possibilities for courses, financial generation and focus on entrepreneurship. Demonstrating sustainable living through on-site waste treatment, re-use of water for gardens and toilet flushing, use of solar roof tiles and solar water geysers, learning about the design and construction of the EcoVillage assists participants in practical ways of making sustainable futures possible.

We have also worked a way to offer to our MPhil students a special rate (together with our ECD learning programmes). This is because of the donor funding we have received, and because we would really like to build up the use of this great space for our programmes.

For reservations or more information re accommodation please contact Tania Klink; tel. +27 (21) 8813196, fax +27 (21) 881-3294, email [tania@sustainabilityinstitute.net](mailto:tania@sustainabilityinstitute.net). **Accommodation is limited and therefore subject to availability.**

**DAILY ROUTINE FOR MODULES DELIVERED AT THE SUSTAINABILITY INSTITUTE****Mondays:**

|               |                       |
|---------------|-----------------------|
| 07:00 – 08:00 | <i>breakfast</i>      |
| 08:30 – 13:00 | main teaching session |
| 13:00 – 14:00 | <i>lunch</i>          |
| 14:00 – 15:30 | group work            |
| 15:30 – 16:00 | <i>tea</i>            |
| 16:00 – 17:30 | teaching session      |
| 18:00         | <i>dinner</i>         |

**Tuesdays–Fridays**

|               |   |
|---------------|---|
| 07:00 – 8:00  | <i>breakfast</i>  |
| 08:15 – 08:25 | gather in the hall for morning briefing, notices, messages and task assignments |
| 08:25 – 09:15 | community work  |
| 09:15 – 09:30 | freshen up and proceed to classroom   |
| 09:30 – 13:00 | main teaching session   |
| 13:00 – 14:00 | <i>lunch</i>  |
| 14:00 – 15:30 | group work  |
| 15:30 – 16:00 | <i>tea</i>  |
| 16:00 – 17:30 | teaching session  |
| 18:00         | <i>dinner</i>   |

## Saturdays

07:00 – 08:00 *breakfast*

09:00 – 13:00 group presentations

## APPLICATION PROCEDURE

### CLOSING DATES FOR APPLICATIONS:

**31 AUGUST (Postgraduate Diploma in Sustainable Development)**  
**30 SEPTEMBER (MPhil in Sustainable Development)**

**The University must be in possession of ALL your supporting documents by these dates**

Please familiarize yourself with the [entry requirements](#) before applying for either of the two programmes.

## PGD IN SUSTAINABLE DEVELOPMENT

**CLOSING DATE FOR APPLICATIONS: 31 AUGUST OF THE YEAR PRIOR TO THE YEAR FOR WHICH YOU ARE APPLYING**

The application process for the PGD in Sustainable Development programme is two-fold, namely:

- firstly, by applying to Stellenbosch University; and
- secondly, if accepted by the University, by applying to the Department, namely the School of Public Leadership.

The complete process is described below.

### 1. STELLENBOSCH UNIVERSITY APPLICATION

#### Step 1

- Information you will need for your application:
  - Faculty: Economic and Management Sciences
  - Department: School of Public Leadership
  - Programme: Postgraduate Diploma in Sustainable Development
- Apply online at:  
<http://www0.sun.ac.za/international/postgraduate/degree-studies-postgraduate-how-to-apply>
- \* Students enrolled at Stellenbosch University at the time of application complete an abbreviated application form which is available from the Programme Administrator.
- If it is impossible to apply online, an application form may be requested from the Programme Administrator (see below for contact details).
- All applicants receive a student number via email or sms (text message). This is not an indication that you have been accepted by the University.
- If you have applied online, you need to mail proof of payment of admission fees (not applicable to international students), certificates and a signed agreement to the University at [info@sun.ac.za](mailto:info@sun.ac.za).
- Your application will not be processed further unless the University receives all the documents described above.
- If you submit a paper application form please include all documents described above and post them to the address on the application form; or scan & email them to [info@sun.ac.za](mailto:info@sun.ac.za) .. Please ensure that the scanned copies are clear and easy to read. The application forms do not fax well and you are advised not to fax your applications.
- **All the documents mentioned above need to be submitted to the University by 31 August, in other words the University must be in possession of your complete application by 31 August, otherwise your application will be considered late.**
- It is your responsibility to follow up with the University Call Centre to confirm that your application is on the system and that all supporting documents have been received.

## Step 2

Once your application has been successfully processed by University Admissions you will receive an email or sms (text message) with your University password. Please note that this is not an indication that you have been accepted for the PGD in Sustainable Development.

## Step 3

Your application is reviewed by the Faculty Secretary (and International Office if you are an international student) to ensure that you comply with the entry requirements for the PGD in Sustainable Development programme. This process starts in the second semester i.e. from end July.

## Step 4

The names of applicants accepted by Faculty are sent to the Department.

## 2. DEPARTMENTAL APPLICATION

### Step 5

The Programme Administrator will email a departmental application form to you if you have been accepted by Faculty. There may be a substantial time lapse between your University application submission and contact by the Programme Administrator – most often this is due to university applications being incomplete, but also because the Faculty review process only commences end July. It is the applicant's responsibility to follow up on applications submitted. The completed departmental application form plus a motivation (1000 words) of why you wish to study the PGD in Sustainable Development must be emailed back to the Programme Administrator within 10 days of receiving the email and departmental application form.

### Step 6

Your departmental application will be reviewed and you will be notified whether your application was successful or not by the second week of November.

## **MPHIL IN SUSTAINABLE DEVELOPMENT**

**CLOSING DATE FOR APPLICATIONS: 30 SEPTEMBER OF THE YEAR PRIOR TO THE YEAR FOR WHICH YOU ARE APPLYING**

Preference will be given to students who obtained 65% or higher for each of their respective modules in the BPhil/PGD programme.

The application process is twofold, namely:

### 1. **Research Concept note**

All applicants must submit an electronic copy of a 1000 word research concept note to the Programme Administrator by 30 September of the year prior to the year for which you are applying. The concept note template is available from the Programme Administrator.

### 2. **Stellenbosch University application**

\* Students enrolled in the PGD in Sustainable Development programme at the time of application complete an abbreviated application form which is available from the Programme Administrator.

\* All other applicants must complete an online registration form at:

<http://www0.sun.ac.za/international/postgraduate/degree-studies-postgraduate-how-to-apply>

Information you will need for your application:

- Faculty: Economic and Management Sciences
- Department: School of Public Leadership
- Programme: MPhil in Sustainable Development

See Steps 1-4 above.

**Please note:** Students who are conditionally accepted for MPhil studies are required to attend:

- a **Colloquium** (where current students present their research) on 4 and 5 November 2013 for studies in 2014;
- a **Research Workshop** on 6 and 7 November 2013 for studies in 2014; and
- a **Proposal Writing Workshop** on 8 November 2013 for studies in 2014.

Attendance is compulsory for all three these events.

### **CONTACT THE CORRECT DIVISION FOR ENQUIRIES RELATING TO THE APPLICATION PROCEDURE:**

- Enquiries relating to your *online university application*: University Call Centre, tel. +27 21 808 9111; [info@sun.ac.za](mailto:info@sun.ac.za).
- Enquiries relating to your PGD *departmental application* or MPhil *research concept note*: Beatrix Steenkamp (Programme Administrator), tel. +27 21 881 3952; email [Beatrix.steenkamp@spl.sun.ac.za](mailto:Beatrix.steenkamp@spl.sun.ac.za).
- Enquiries relating to *funding, visas, language proficiency, etc.*: Postgraduate & International Office, tel. +27 21 808 2565; [www.sun.ac.za/international](http://www.sun.ac.za/international); email [interoff@sun.ac.za](mailto:interoff@sun.ac.za);

### **USEFUL CONTACT INFORMATION**

|   |                                  |
|---|----------------------------------|
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|  |  |
|--|--|
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**DATES AND DEADLINES 2014\***

\*Please note that these dates are subject to change

| Module   | Module Codes |     |     | Webstudies code | Date presented         | Assignment due date |
|--|--------------|-----|-----|-----------------|------------------------|---------------------|
| <b>Compulsory Orientation/Induction</b>  |              |     |     |                 | <b>29 – 31 Jan</b>     | N/A                 |
| Sustainable Development I (compulsory)   | 58718        | 771 | 871 | <b>MS02903</b>  | 03 – 14 Feb            | 31 March            |
| Sustainable Development II (for students from other programmes)                    | 58718        | 771 | 871 | <b>MS02903</b>  | 03 – 08 March          | 21 April            |
| Sustainable Dev III (UCT, execs, international students)                           | 58718        | 771 | 871 | <b>MSO2903</b>  | 10 – 15 March          | 28 April            |
| Intro to Development Planning  | 12230        | 771 | 873 | <b>MS03151</b>  | 10 – 15 March          | 28 April            |
| Complexity Theory & Syst Think   | 11190        | 772 | 871 | <b>MS01354</b>  | 24 – 29 March          | 12 May              |
| Food Security & Glob Agricult.   | 12232        | 774 | 874 | <b>MS03208</b>  | 31 March -05 Apr       | 19 May              |
| Leadership & Env Ethics  | 11491        | 773 | 873 | <b>MS01356</b>  | 07 – 12 April          | 26 May              |
| Sustainable Enterprise   | 11191        | 774 | 874 | <b>MS01355</b>  | 05 – 10 May            | 23 June             |
| DP Theory & Practice   | 11194        | 772 | 871 | <b>MS02900</b>  | 12 – 17 May            | 30 June             |
| Facilitation for Sustainability Transitions  | 11489        | 772 | 872 |                 | 12 – 17 May            | 30 June             |
| DP Systems, Policy & Law   | 11182        | 772 | 872 | <b>MS02899</b>  | 19 – 24 May            | 07 July             |
| Renewable Energy Policy  | 11651        | 771 | 871 | <b>M S02015</b> | 19 – 24 May            | 07 July             |
| Ecological Design for Com Build  | 11188        | 776 | 876 | <b>MS01353</b>  | 02 – 07 June           | 21 July             |
| Systems & Techn for SA   | 12231        | 774 | 874 | <b>MS03209</b>  | 02 – 07 June           | 21 July             |
| Biodiversity & Ecosystem Services  | 11490        | 772 | 872 | <b>MS01352</b>  | 09 – 14 June           | 28 July             |
| Sustainable Cities   | 11199        | 775 | 875 | <b>MS01361</b>  | 23 – 28 June           | 11 August           |
| Regional Food Systems  | tbc          | 772 | 871 | <b>tbc</b>      | 30 June – 05 July      | 18 August           |
| Governance, Globalis & Civ Soc   | 11195        | 773 | 873 | <b>MS01359</b>  | 07 – 12 July           | 25 August           |
| Renewable Energy Finance   | 12531        | 771 | 871 | <b>MS02013</b>  | 14 – 19 July           | 01 September        |
| DP & Environmental Analysis  | 55492        | 771 | 873 | <b>MS01357</b>  | 21 – 26 July           | 08 September        |
| Applied Economics  | 11198        | 775 | 874 | <b>MS01360</b>  | 11 – 16 August         | 29 September        |
| <i>SI Explorers</i> Food Security & Globalised Agriculture NEPAL                   |              |     |     |                 | 18 Aug – 1 Sept<br>TBC | 15 October<br>TBC   |
| System Dynamics Modelling  | 12530        | 771 | 871 | <b>MS03420</b>  | 18 – 29 August         | 13 October          |
| <i>SI Explorers</i> Ecological Design for Community Building NEPAL                 |              |     |     |                 | 09 – 28 Sept TBC       | 25 Oct TBC          |
| <b>MPhil 2015 concept note</b>   |              |     |     | <b>MS02277</b>  | N/A                    | 30 September        |
| <b>MPhil research workshop / Research Methodology</b>                              | 11273        |     | 871 | <b>MS02277</b>  | 03 – 07 November       | TBA                 |
| <b>MPhil research colloquium / Research Dissemination</b>                          | 51764        |     | 871 | <b>MS02277</b>  | 06 - 07 November       | N/A                 |
| <b>MPhil 2015 research proposal</b>  |              |     |     | <b>MS02277</b>  | N/A                    | 12 December         |
| <b>RENEWABLE &amp; SUSTAINABLE ENERGY MODULES (OFFERED BY DEPT OF ENGINEERING)</b> |              |     |     |                 |                        |                     |

|                                     |       |     |     |  |                   |     |
|-------------------------------------|-------|-----|-----|--|-------------------|-----|
| <i>Renewable Energy Systems</i>     | 64890 | 714 | 814 |  | 31 March – 05 Apr | TBA |
| <i>Introduction to Solar Energy</i> | 11294 | 747 | 847 |  | 09 - 14 June      | TBA |

|  |       |     |     |  |                |     |
|--|-------|-----|-----|--|----------------|-----|
| <i>Bioenergy</i>                       | 64904 | 744 | 844 |  | 11 – 16 August | TBA |
| <i>Wind &amp; Hydro Energy</i>         | 11948 | 774 | 874 |  | 01 – 06 Sept   | TBA |
| <i>Ocean &amp; Hydro/special topic</i> |       |     |     |  | 01 – 06 Sept   | TBA |

## Appendix 2 --- Full Data Sheets – March to May 2013 and March to May 2014 – Food Receipts

### FOOD PURCHASING AT THE SUSTAINABILITY INSTITUTE - - - MARCH 2013

| WHEN?    | WHO?                             | WHAT?                   | WHERE?                              | HOW MUCH?(ZAR) |
|----------|----------------------------------|-------------------------|-------------------------------------|----------------|
| Mar---13 | Farm to Fork / Guest House       | tomatopaste             | Pick n Pay                          | 17,16          |
| Mar---13 | umzi wethu                       | Alpen Nutrific          | Pick n Pay                          | 54,99          |
| Mar---13 | Youth                            | Apple                   | Timberlea Farming Trust (Blue jay)  | 510,00         |
| Mar---13 | Creche                           | Apples                  | Pick n Pay                          | 85,83          |
| Mar---13 | 0351/000 PR130                   | apples                  | Pick n Pay                          | 33,41          |
| Mar---13 | BA 030 / Account number 0065/003 | apples                  | Pick n Pay                          | 60,00          |
| Mar---13 | PR130 / account number 0351/000  | apples                  | Pick n Pay                          | 29,97          |
| Mar---13 | PR130 / account number 0351/000  | apples                  | Pick n Pay                          | 39,96          |
| Mar---13 | After Care                       | Apples                  | Timberlea Farming Trust (Blue jay)  | 330,00         |
| Mar---13 | After Care                       | Apples                  | Timberlea Farming Trust (Blue jay)  | 180,00         |
| Mar---13 | Umzi Wethu                       | Apples                  | Timberlea Farming Trust t/a Bluejay | 120,00         |
| Mar---13 | BA 030 / Account number 0065/003 | Apples Gala             | Food Lovers Market                  | 132,99         |
| Mar---13 | BA 030 / Account number 0065/003 | Apples Gala             | Pick n Pay                          | 30,00          |
| Mar---13 | BA 030 / Account number 0065/003 | Apples Gala             | Pick n Pay                          | 33,98          |
| Mar---13 | BA 030 / Account number 0065/003 | Apples Gold             | Pick n Pay                          | 39,98          |
| Mar---13 | BA 030 / Account number 0065/003 | apples royal gala       | Pick n Pay                          | 30,00          |
| Mar---13 | Umzi Wethu                       | Apples Royal Gala Med   | Pick n Pay                          | 2,50           |
| Mar---13 | Umzi Wethu                       | Apples Royal Gala Med   | Pick n Pay                          | 2,50           |
| Mar---13 | Umzi Wethu                       | Apples Royal Gala Med   | Pick n Pay                          | 2,50           |
| Mar---13 | Umzi Wethu                       | Apples Royal Gala Med   | Pick n Pay                          | 2,50           |
| Mar---13 | Umzi Wethu                       | Apples Royal Gala Med   | Pick n Pay                          | 2,50           |
| Mar---13 | Umzi Wethu                       | Apples Royal Gala Med   | Pick n Pay                          | 2,50           |
| Mar---13 | Farm to Fork / Guest House       | Baby Plum               | Shoprite                            | 54,95          |
| Mar---13 | Farm to Fork                     | Babymarrow              | JWC Fruits and Veggies              | 20,00          |
| Mar---13 | Farm to Fork / Guest House       | Bacon                   | Shoprite                            | 67,96          |
| Mar---13 | Farm to Fork / Guest House       | Bakers Blue Label Marie | Pick n Pay                          | 32,34          |
| Mar---13 | Farm to Fork / Guest House       | Bakers Blue Label Marie | Pick n Pay                          | 21,56          |
| Mar---13 | Farm to Fork / Guest House       | Bakers Blue Label Marie | Pick n Pay                          | 9,89           |
| Mar---13 | UM001 / 1306/000                 | baking powder           | Stellenbosch Cash and Carry         | 71,98          |
| Mar---13 | Farm to Fork / Guest House       | bananas                 | Pick n Pay                          | 8,32           |
| Mar---13 | BA 030 / Account number 0065/003 | Bananas                 | Pick n Pay                          | 15,99          |
| Mar---13 | BA 030 / Account number 0065/003 | Bananas                 | Pick n Pay                          | 15,99          |
| Mar---13 | BA 030 / Account number 0065/003 | Bananas                 | Pick n Pay                          | 15,99          |
| Mar---13 | Farm to Fork / Guest House       | barbecue spice          | Pick n Pay                          | 28,78          |
| Mar---13 | UM001 / 1306/000                 | bbq spice               | Stellenbosch Cash and Carry         | 23,99          |
| Mar---13 | Farm to Fork / Guest House       | Beans                   | Gardens and Grounds                 | 160,00         |
| Mar---13 | Farm to Fork / Guest House       | Beans                   | Gardens and Grounds                 | 40,00          |
| Mar---13 | umzi wethu                       | beans butter beans      | Pick n Pay                          | 68,53          |
| Mar---13 | umzi wethu                       | beans butter beans      | Pick n Pay                          | 9,99           |
| Mar---13 | Farm to Fork / Guest House       | Beef                    | Fairfield Meat Centre               | 120,00         |
| Mar---13 | Farm to Fork / Guest House       | Beef                    | Fairfield Meat Centre               | 120,00         |
| Mar---13 | Umzi Wethu                       | Beef Mince              | WP Vleis Groothandelaars (PTY) Ltd  | 464,89         |
| Mar---13 | Farm to Fork / Guest House       | Beetroot                | Food Lovers Market                  | 39,90          |
| Mar---13 | umzi wethu                       | beetroot                | Pick n Pay                          | 20,97          |
| Mar---13 | Farm to Fork / Guest House       | berry yogurt            | Pick n Pay                          | 16,79          |
| Mar---13 | umzi wethu                       | Bicarb Soda             | Pick n Pay                          | 13,49          |
| Mar---13 | Umzi Wethu                       | Biscuit                 | Value Baking Supermarket Strand     | 11,85          |
| Mar---13 | Farm to Fork / Guest House       | biscuit marie           | Pick n Pay                          | 4,99           |
| Mar---13 | umzi wethu                       | biscuit marie           | Pick n Pay                          | 29,94          |
| Mar---13 | Farm to Fork / Guest House       | black pepper            | Pick n Pay                          | 68,07          |
| Mar---13 | Farm to Fork / Guest House       | Blare                   | Gardens and Grounds                 | 12,00          |
| Mar---13 | Umzi Wethu                       | Boerewors               | De Vleismeul                        | 351,48         |
| Mar---13 | Farm to Fork / Guest House       | Boontsies               | Gardens and Grounds                 | 150,00         |
| Mar---13 | umzi wethu                       | br...mi mix whole       | Pick n Pay                          | 46,14          |
| Mar---13 | UM001 / 1306/000                 | braai sout              | Stellenbosch Cash and Carry         | 16,99          |
| Mar---13 | Farm to Fork / Guest House       | braai&grill seasoning   | Pick n Pay                          | 40,98          |
| Mar---13 | Farm to Fork / Guest House       | braai&grill seasoning   | Pick n Pay                          | 40,98          |
| Mar---13 | UM001 / 1306/000                 | Brand corn meat         | Stellenbosch Cash and Carry         | 105,99         |
| Mar---13 | Umzi                             | Brinjal                 | Gardens and Grounds                 | 40,00          |
| Mar---13 | Farm to Fork / Guest House       | Brinjal                 | Gardens and Grounds                 | 60,00          |
| Mar---13 | Umzi                             | Brinjals                | Gardens and Grounds                 | 15,00          |
| Mar---13 | Farm to Fork / Guest House       | Brinjals                | Gardens and Grounds                 | 120,00         |
| Mar---13 | Farm to Fork / Guest House       | Broc&Cauli              | Pick n Pay                          | 160,55         |
| Mar---13 | Farm to Fork / Guest House       | broccoli                | Food Lovers Market                  | 63,49          |
| Mar---13 | Farm to Fork / Guest House       | broccoli                | Pick n Pay                          | 79,95          |
| Mar---13 | Farm to Fork / Guest House       | broccoli                | Pick n Pay                          | 17,95          |
| Mar---13 | UM001 / 1306/000                 | Brown Bread             | Pick n Pay                          | 17,78          |
| Mar---13 | Green Café                       | Brown Bread Flour       | Eureka Meulens                      | 260,97         |
| Mar---13 | Farm to Fork / Guest House       | brown lentils           | Shoprite                            | 95,88          |
| Mar---13 | umzi wethu                       | Brown premium           | Checkers                            | 23,97          |
| Mar---13 | PR130 / account number 0351/000  | Brown premium bread     | Pick n Pay                          | 31,16          |
| Mar---13 | Green Café                       | Brown Sugar             | Pick n Pay                          | 32,48          |
| Mar---13 | Green Café                       | Brown Sugar             | Pick n Pay                          | 71,96          |
| Mar---13 | Farm to Fork / Guest House       | Brown Sugar             | Pick n Pay                          | 29,98          |
| Mar---13 | Farm to Fork / Guest House       | Brown Sugar             | Pick n Pay                          | 17,99          |

|          |                                 |                         |                                 |        |
|----------|---------------------------------|-------------------------|---------------------------------|--------|
| Mar---13 | Account 1306/001                | Brown SugarPNP          | Pick n Pay                      | 42,98  |
| Mar---13 | Umzi Wethu                      | Brownbread Flour        | Eureka Meulens                  | 396,67 |
| Mar---13 | Farm to Fork / Guest House      | Bulk LeanMince          | Pick n Pay                      | 373,15 |
| Mar---13 | Farm to Fork / Guest House      | bulk ostr&beef mince    | Pick n Pay                      | 287,44 |
| Mar---13 | umzi wethu                      | bulk ou kraal wors      | Pick n Pay                      | 219,38 |
| Mar---13 | umzi wethu                      | Bulk Stewing Lamb       | Pick n Pay                      | 209,51 |
| Mar---13 | Farm to Fork / Guest House      | butter salted           | Pick n Pay                      | 119,96 |
| Mar---13 | Green Café                      | buttersalted            | Pick n Pay                      | 127,96 |
| Mar---13 | Farm to Fork / Guest House      | butter salted           | Pick n Pay                      | 108,95 |
| Mar---13 | Farm to Fork / Guest House      | buttersalted            | Pick n Pay                      | 179,94 |
| Mar---13 | Farm to Fork / Guest House      | butternut               | Food Lovers Market              | 29,99  |
| Mar---13 | Farm to Fork                    | Butternut               | JWC Fruits and Veggies          | 50,00  |
| Mar---13 | UM001 /1306/000                 | Butternut               | Pick n Pay                      | 30,26  |
| Mar---13 | Farm to Fork / Guest House      | c flower & broccoli pp  | Pick n Pay                      | 15,99  |
| Mar---13 | umzi wethu                      | cabbage                 | Pick n Pay                      | 14,99  |
| Mar---13 | GC000                           | Cadbury Hot Chocolate   | Pick n Pay                      | 134,97 |
| Mar---13 | Umzi                            | Carrots                 | Gardens and Grounds             | 24,00  |
| Mar---13 | Umzi                            | Carrots                 | Gardens and Grounds             | 16,00  |
| Mar---13 | Farm to Fork / Guest House      | Carrots                 | Gardens and Grounds             | 80,00  |
| Mar---13 | Farm to Fork / Guest House      | Carrots                 | Gardens and Grounds             | 120,00 |
| Mar---13 | Farm to Fork / Guest House      | Carrots                 | Gardens and Grounds             | 80,00  |
| Mar---13 | Farm to Fork                    | Carrots                 | JWC Fruits and Veggies          | 30,00  |
| Mar---13 | Farm to Fork                    | Carrots                 | JWC Fruits and Veggies          | 30,00  |
| Mar---13 | Farm to Fork                    | Carrots                 | JWC Fruits and Veggies          | 30,00  |
| Mar---13 | Farm to Fork / Guest House      | Carrots (Wortels)       | Gardens and Grounds             | 80,00  |
| Mar---13 | Farm to Fork / Guest House      | cauliflower             | Food Lovers Market              | 87,92  |
| Mar---13 | Farm to Fork / Guest House      | cauliflower             | Pick n Pay                      | 49,95  |
| Mar---13 | Farm to Fork / Guest House      | cauliflower             | Pick n Pay                      | 95,94  |
| Mar---13 | Farm to Fork / Guest House      | Cheddar                 | Food Lovers Market              | 40,44  |
| Mar---13 | Farm to Fork / Guest House      | Cheddar                 | Food Lovers Market              | 34,90  |
| Mar---13 | Green Café                      | Cheddar                 | Pick n Pay                      | 139,98 |
| Mar---13 | Farm to Fork / Guest House      | Cheddar                 | Pick n Pay                      | 69,99  |
| Mar---13 | UM001 /1306/000                 | Cheddar Loaf            | Stellenbosch Cash and Carry     | 275,49 |
| Mar---13 | Farm to Fork / Guest House      | Cheddar Mini Loaf       | Pick n Pay                      | 84,14  |
| Mar---13 | Farm to Fork / Guest House      | Cheddar Mini Loaf       | Pick n Pay                      | 198,38 |
| Mar---13 | Green Café                      | Cheddar Mini Loaf       | Pick n Pay                      | 83,35  |
| Mar---13 | Green Café                      | Cheddar Mini Loaf       | Pick n Pay                      | 106,55 |
| Mar---13 | umzi wethu                      | cheese traditional      | Pick n Pay                      | 65,98  |
| Mar---13 | Farm to Fork                    | Chicken                 | ACM Robb                        | 346,80 |
| Mar---13 | umzi wethu                      | Chicken Liver           | Pick n Pay                      | 71,96  |
| Mar---13 | Farm to Fork / Guest House      | chicken spice           | Pick n Pay                      | 20,49  |
| Mar---13 | Farm to Fork / Guest House      | chicken spice           | Pick n Pay                      | 61,47  |
| Mar---13 | Farm to Fork / Guest House      | chicken spice           | Pick n Pay                      | 31,96  |
| Mar---13 | Green Café                      | Chips and Biltong       | Rootstock Vegi                  | 340,29 |
| Mar---13 | Green Café                      | Chocolates/ Nougat      | Olive Grove                     | 985,76 |
| Mar---13 | UM001 /1306/000                 | chutney mild d/kist     | Stellenbosch Cash and Carry     | 60,99  |
| Mar---13 | Green Café                      | clover UHT Milk         | Pick n Pay                      | 125,98 |
| Mar---13 | Umzi Wethu                      | Cocoa Powder            | Value Baking Supermarket Strand | 25,00  |
| Mar---13 | Green Café                      | Coffee                  | Espresso Blend + Mexico Organic | 635,00 |
| Mar---13 | Green Café                      | Coffee                  | Legado                          | 359,99 |
| Mar---13 | Green Café                      | Coffee                  | Legado                          | 719,98 |
| Mar---13 | Over Heads                      | Coffee                  | Legado                          | 540,02 |
| Mar---13 | Over Heads                      | Coffee                  | Legado                          | 539,98 |
| Mar---13 | Farm to Fork / Guest House      | condensed milk          | Pick n Pay                      | 63,16  |
| Mar---13 | umzi wethu                      | cooking oil             | Pick n Pay                      | 73,99  |
| Mar---13 | Green Café                      | cooking spray           | Pick n Pay                      | 49,98  |
| Mar---13 | Umzi Wethu                      | Cordon Bleu Margerine   | Value Baking Supermarket Strand | 54,00  |
| Mar---13 | Farm to Fork / Guest House      | corn whole              | Shoprite                        | 8,99   |
| Mar---13 | umzi wethu                      | corned meat 45%         | Pick n Pay                      | 29,98  |
| Mar---13 | umzi wethu                      | crmy island dress       | Pick n Pay                      | 16,99  |
| Mar---13 | Farm to Fork / Guest House      | Crown Oil               | Shoprite                        | 44,95  |
| Mar---13 | Farm to Fork / Guest House      | crowon cooking oil      | Pick n Pay                      | 73,99  |
| Mar---13 | umzi wethu                      | crush ginger and garlic | Pick n Pay                      | 35,97  |
| Mar---13 | UM001 /1306/000                 | crystal suiker          | Stellenbosch Cash and Carry     | 213,99 |
| Mar---13 | umzi wethu                      | cucumber                | Pick n Pay                      | 14,98  |
| Mar---13 | Farm to Fork / Guest House      | Cucumber                | Shoprite                        | 35,94  |
| Mar---13 | umzi wethu                      | custard powder refill   | Pick n Pay                      | 16,99  |
| Mar---13 | UM001 /1306/000                 | e/day beans & tom       | Stellenbosch Cash and Carry     | 53,99  |
| Mar---13 | Farm to Fork                    | Eggs                    | ACM Robb                        | 25,00  |
| Mar---13 | PR130 / account number 0351/000 | Elim Liver Coarse       | Pick n Pay                      | 44,95  |
| Mar---13 | UM001 /1306/000                 | English Cucumber        | Pick n Pay                      | 17,85  |
| Mar---13 | UM001 /1306/000                 | English Cucumber        | Pick n Pay                      | 9,90   |
| Mar---13 | Green Café                      | Expresso Coffee         | Legado Coffee                   | 359,99 |
| Mar---13 | Farm to Fork / Guest House      | f/range eggs            | Pick n Pay                      | 113,97 |
| Mar---13 | Farm to Fork / Guest House      | f/range eggs xlarge     | Pick n Pay                      | 41,99  |
| Mar---13 | umzi wethu                      | fair chicliver          | Pick n Pay                      | 59,96  |
| Mar---13 | Farm to Fork / Guest House      | feta                    | Pick n Pay                      | 51,98  |
| Mar---13 | Farm to Fork / Guest House      | flour cake              | Pick n Pay                      | 16,99  |
| Mar---13 | Umzi Wethu                      | Flour Self Raising      | Pick n Pay                      | 25,49  |
| Mar---13 | Farm to Fork / Guest House      | free range egg          | Pick n Pay                      | 159,96 |
| Mar---13 | UM001 /1306/000                 | free range egg          | Pick n Pay                      | 79,98  |
| Mar---13 | Farm to Fork / Guest House      | free range egg          | Pick n Pay                      | 193,95 |
| Mar---13 | umzi wethu                      | fresh chicken breasts   | Pick n Pay                      | 138,75 |
| Mar---13 | Farm to Fork / Guest House      | fresh chicken breasts   | Pick n Pay                      | 58,27  |
| Mar---13 | Farm to Fork / Guest House      | fresh chicken breasts   | Pick n Pay                      | 111,71 |
| Mar---13 | Farm to Fork / Guest House      | fresh cream             | Pick n Pay                      | 29,97  |
| Mar---13 | Farm to Fork / Guest House      | Fresh Cream             | Shoprite                        | 59,94  |

|          |                            |                        |                                 |          |
|----------|----------------------------|------------------------|---------------------------------|----------|
| Mar---13 | Farm to Fork / Guest House | Fresh Cream (250ml)    | Pick n Pay                      | 35,96    |
| Mar---13 | Farm to Fork / Guest House | Full Cream Milk        | Pick n Pay                      | 45,99    |
| Mar---13 | Farm to Fork / Guest House | Full Cream Milk        | Pick n Pay                      | 249,95   |
| Mar---13 | Green Café                 | Full Cream Milk        | Pick n Pay                      | 99,98    |
| Mar---13 | Farm to Fork / Guest House | fusilli                | Shoprite                        | 47,94    |
| Mar---13 | Farm to Fork / Guest House | garlic & pepper        | Pick n Pay                      | 81,96    |
| Mar---13 | Farm to Fork / Guest House | garlic pepper          | Pick n Pay                      | 40,98    |
| Mar---13 | Farm to Fork / Guest House | Gherkin Sweet and Sour | Shoprite                        | 17,99    |
| Mar---13 | Farm to Fork / Guest House | Ginger                 | Pick n Pay                      | 17,78    |
| Mar---13 | Account 1306/001           | Golden Brown Sugar     | Pick n Pay                      | 11,99    |
| Mar---13 | Umzi Wethu                 | Golden Syrup in Bottle | Pick n Pay                      | 13,29    |
| Mar---13 | GC000---0710/000           | Golden Yolk Large      | Food Lovers Market              | 111,97   |
| Mar---13 | UM001 /1306/000            | grandemacaroni         | Stellenbosch Cash and Carry     | 50,99    |
| Mar---13 | Farm to Fork / Guest House | Grated Parmesa         | Shoprite                        | 19,99    |
| Mar---13 | Green Café                 | Green Beans            | Nowo Organics                   | 40,00    |
| Mar---13 | Farm to Fork / Guest House | Green Peppers          | Gardens and Grounds             | 15,00    |
| Mar---13 | Farm to Fork / Guest House | Green Peppers          | Gardens and Grounds             | 10,00    |
| Mar---13 | Farm to Fork / Guest House | ground turmeric refill | Pick n Pay                      | 43,75    |
| Mar---13 | Farm to Fork / Guest House | health brown rice      | Pick n Pay                      | 26,99    |
| Mar---13 | Farm to Fork / Guest House | Health Rice            | Checkers                        | 77,94    |
| Mar---13 | Farm to Fork / Guest House | herb&garlic seasoning  | Pick n Pay                      | 20,49    |
| Mar---13 | Umzi Wethu                 | Herbs / Parsley        | Pick n Pay                      | 7,99     |
| Mar---13 | Farm to Fork / Guest House | hot chutney            | Pick n Pay                      | 31,31    |
| Mar---13 | Farm to Fork / Guest House | hulletts wht sugar     | Pick n Pay                      | 49,98    |
| Mar---13 | Green Café                 | Ice Tea (Bos)          | Chill Direct                    | 648,56   |
| Mar---13 | Umzi Wethu                 | Icing Sugar            | Value Baking Supermarket Strand | 14,50    |
| Mar---13 | Farm to Fork / Guest House | imbo barley            | Pick n Pay                      | 24,76    |
| Mar---13 | Farm to Fork / Guest House | imbo fine coconut      | Pick n Pay                      | 26,99    |
| Mar---13 | Green Café                 | Imbo PopCorn           | Pick n Pay                      | 92,90    |
| Mar---13 | Farm to Fork / Guest House | Inst Coffee            | Shoprite                        | 63,95    |
| Mar---13 | Farm to Fork / Guest House | iwisa super m/meal     | Pick n Pay                      | 28,79    |
| Mar---13 | Farm to Fork / Guest House | Jam super apricot      | Pick n Pay                      | 56,97    |
| Mar---13 | Farm to Fork / Guest House | Jimmy's SteakHouse     | Fairfield Meat Centre           | 51,95    |
| Mar---13 | Umzi Wethu                 | Juice                  | Value Baking Supermarket Strand | 79,00    |
| Mar---13 | UM001 /1306/000            | juice fusion mango     | Stellenbosch Cash and Carry     | 30,99    |
| Mar---13 | UM001 /1306/000            | juice tropical         | Stellenbosch Cash and Carry     | 30,99    |
| Mar---13 | Farm to Fork / Guest House | jungle oats            | Pick n Pay                      | 45,98    |
| Mar---13 | UM001 /1306/000            | jungle oats            | Stellenbosch Cash and Carry     | 75,96    |
| Mar---13 | UM001 /1306/000            | Kellogs corn flakes    | Stellenbosch Cash and Carry     | 134,95   |
| Mar---13 | Green Café                 | Kerrygold Yeld Cheddar | Pick n Pay                      | 49,19    |
| Mar---13 | UM001 /1306/000            | knorr soup brown onion | Stellenbosch Cash and Carry     | 38,50    |
| Mar---13 | UM001 /1306/000            | knorr stock beef       | Stellenbosch Cash and Carry     | 21,98    |
| Mar---13 | Farm to Fork / Guest House | knorrox cube           | Shoprite                        | 50,94    |
| Mar---13 | UM001 /1306/000            | koo sweetcorn          | Stellenbosch Cash and Carry     | 118,99   |
| Mar---13 | Farm to Fork / Guest House | koo tomato paste       | Pick n Pay                      | 35,94    |
| Mar---13 | Farm to Fork / Guest House | l/f mix berry yogurt   | Pick n Pay                      | 16,79    |
| Mar---13 | Farm to Fork / Guest House | l/smith ched m/loaf    | Pick n Pay                      | 141,19   |
| Mar---13 | Farm to Fork / Guest House | ladismith butter       | Pick n Pay                      | 63,98    |
| Mar---13 | Farm to Fork / Guest House | large wrap             | Food Lovers Market              | 71,98    |
| Mar---13 | UM001 /1306/000            | leaf masala            | Stellenbosch Cash and Carry     | 23,50    |
| Mar---13 | Green Café                 | Lemonade               | Pru's                           | 180,00   |
| Mar---13 | UM001 /1306/000            | lentils                | Stellenbosch Cash and Carry     | 17,00    |
| Mar---13 | Green Café                 | Lettuce                | Nowo Organics                   | 120,00   |
| Mar---13 | Farm to Fork / Guest House | Lettuce                | Pick n Pay                      | 10,95    |
| Mar---13 | umzi wethu                 | lettuce                | Pick n Pay                      | 18,98    |
| Mar---13 | Guest House (0612/000)     | long life f/cream milk | Pick n Pay                      | 319,95   |
| Mar---13 | Over Heads (OH020)         | long life f/cream milk | Pick n Pay                      | 127,98   |
| Mar---13 | Account 1306/001           | Low Fat Milk           | Pick n Pay                      | 45,99    |
| Mar---13 | Account 1306/001           | Low Fat Milk           | Pick n Pay                      | 45,99    |
| Mar---13 | umzi wethu                 | low fat tub            | Pick n Pay                      | 91,80    |
| Mar---13 | UM001 /1306/000            | m/bay pilchtom         | Stellenbosch Cash and Carry     | 119,90   |
| Mar---13 | UM001 /1306/000            | m/bay pilchtom         | Stellenbosch Cash and Carry     | 59,95    |
| Mar---13 | umzi wethu                 | macaroni               | Pick n Pay                      | 52,74    |
| Mar---13 | Farm to Fork / Guest House | macaroni               | Pick n Pay                      | 131,85   |
| Mar---13 | Farm to Fork / Guest House | macaroni               | Pick n Pay                      | 125,82   |
| Mar---13 | Farm to Fork / Guest House | macaroni               | Pick n Pay                      | 131,85   |
| Mar---13 | Farm to Fork / Guest House | macaroni               | Shoprite                        | 72,90    |
| Mar---13 | Farm to Fork / Guest House | maize meal             | Pick n Pay                      | 28,49    |
| Mar---13 | Farm to Fork / Guest House | maize meal             | Shoprite                        | 24,99    |
| Mar---13 | Umzi Wethu                 | Marshmallow            | Pick n Pay                      | 53,99    |
| Mar---13 | Umzi Wethu                 | Marshmallow            | Pick n Pay                      | 54,99    |
| Mar---13 | Farm to Fork / Guest House | Marvello Marg          | Shoprite                        | 55,96    |
| Mar---13 | Green Café                 | MAYO PETBOTTLE         | Pick n Pay                      | 37,99    |
| Mar---13 | Farm to Fork / Guest House | MAYO PETBOTTLE         | Pick n Pay                      | 37,99    |
| Mar---13 | Farm to Fork / Guest House | mayonnaise             | Pick n Pay                      | 44,49    |
| Mar---13 | Farm to Fork / Guest House | mayonnaise             | Pick n Pay                      | 79,99    |
| Mar---13 | Farm to Fork / Guest House | med curry              | Pick n Pay                      | 18,99    |
| Mar---13 | Farm to Fork / Guest House | mild american mustard  | Pick n Pay                      | 89,97    |
| Mar---13 | UM001 /1306/000            | Milk                   | Stellenbosch Cash and Carry     | 423,98   |
| Mar---13 | Green Café                 | Mini Chkn fillet       | Pick n Pay                      | 202,16   |
| Mar---13 | Farm to Fork / Guest House | Mini Pizzas            | Fairfield Meat Centre           | 50,00    |
| Mar---13 | Farm to Fork / Guest House | Mix Berry Yogurt       | Pick n Pay                      | 16,99    |
| Mar---13 | Farm to Fork / Guest House | Mix Berry Yogurt       | Pick n Pay                      | 16,79    |
| Mar---13 | Green Café                 | Mix Ice Cream          | Marcel's Frozen Yogurt          | 2 201,10 |
| Mar---13 | Umzi                       | Mix Lettuces           | Gardens and Grounds             | 15,00    |
| Mar---13 | Farm to Fork / Guest House | Mix Lettuces           | Gardens and Grounds             | 15,00    |
| Mar---13 | Farm to Fork / Guest House | Mix Lettuces           | Gardens and Grounds             | 15,00    |

|          |                                  |                           |                                    |        |
|----------|----------------------------------|---------------------------|------------------------------------|--------|
| Mar---13 | Farm to Fork / Guest House       | Mix Lettuces              | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House       | Mix Lettuces              | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House       | Mix Lettuces              | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House       | Mix Lettuces              | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House       | Mix Lettuces              | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House       | Mix Lettuces              | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House       | Mix Lettuces              | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House       | mixed fruitsalad          | Food Lovers Market                 | 45,99  |
| Mar---13 | Farm to Fork / Guest House       | muesli                    | Food Lovers Market                 | 29,99  |
| Mar---13 | Umzi Wethu                       | Muffin                    | Value Baking Supermarket Strand    | 65,00  |
| Mar---13 | Farm to Fork / Guest House       | mushroom soup             | Pick n Pay                         | 15,16  |
| Mar---13 | Farm to Fork / Guest House       | Mushrooms White           | Pick n Pay                         | 12,99  |
| Mar---13 | Farm to Fork / Guest House       | Mushrooms White           | Pick n Pay                         | 12,99  |
| Mar---13 | Farm to Fork / Guest House       | Mushrooms White           | Pick n Pay                         | 12,99  |
| Mar---13 | Farm to Fork / Guest House       | Mushrooms White           | Pick n Pay                         | 12,99  |
| Mar---13 | Farm to Fork / Guest House       | Mushrooms White           | Pick n Pay                         | 104,95 |
| Mar---13 | Farm to Fork / Guest House       | Mushrooms White           | Pick n Pay                         | 53,97  |
| Mar---13 | umzi wethu                       | mutton pack               | Pick n Pay                         | 270,16 |
| Mar---13 | Youth                            | Nectarine                 | Timberlea Farming Trust (Blue jay) | 50,00  |
| Mar---13 | BA 030 / Account number 0065/003 | Nectarines                | Food Lovers Market                 | 51,96  |
| Mar---13 | Account 1306/001                 | Nescafe Classic           | Pick n Pay                         | 103,98 |
| Mar---13 | Farm to Fork / Guest House       | Nisa's Pies               | Fairfield Meat Centre              | 44,95  |
| Mar---13 | Farm to Fork / Guest House       | Nisa's Pies               | Fairfield Meat Centre              | 44,95  |
| Mar---13 | Farm to Fork / Guest House       | no name oats              | Pick n Pay                         | 101,94 |
| Mar---13 | Farm to Fork / Guest House       | no name oats              | Pick n Pay                         | 64,00  |
| Mar---13 | Farm to Fork / Guest House       | no name oats              | Pick n Pay                         | 67,96  |
| Mar---13 | Farm to Fork / Guest House       | no name rice              | Pick n Pay                         | 38,99  |
| Mar---13 | Farm to Fork / Guest House       | nola mayonnaise           | Pick n Pay                         | 79,99  |
| Mar---13 | UM001 / 1306/000                 | nola mayonnaise           | Stellenbosch Cash and Carry        | 107,94 |
| Mar---13 | Farm to Fork                     | Onion                     | JWC Fruits and Veggies             | 50,00  |
| Mar---13 | umzi wethu                       | onion                     | Pick n Pay                         | 34,99  |
| Mar---13 | Farm to Fork                     | Onions                    | JWC Fruits and Veggies             | 50,00  |
| Mar---13 | Farm to Fork                     | Onions                    | JWC Fruits and Veggies             | 50,00  |
| Mar---13 | Farm to Fork                     | Onions                    | JWC Fruits and Veggies             | 50,00  |
| Mar---13 | umzi wethu                       | Ostrich and Beef Mince    | Pick n Pay                         | 480,77 |
| Mar---13 | umzi wethu                       | pasta screws              | Pick n Pay                         | 119,88 |
| Mar---13 | Farm to Fork / Guest House       | pawpaw                    | Food Lovers Market                 | 55,96  |
| Mar---13 | Farm to Fork / Guest House       | pawpaw                    | Pick n Pay                         | 57,06  |
| Mar---13 | Farm to Fork / Guest House       | peach and gran yogurt     | Pick n Pay                         | 16,79  |
| Mar---13 | BA 030 / Account number 0065/003 | Peaches Nectarine         | Pick n Pay                         | 11,99  |
| Mar---13 | BA 030 / Account number 0065/003 | Peaches Nectarine         | Pick n Pay                         | 35,97  |
| Mar---13 | Youth                            | Pear                      | Timberlea Farming Trust (Blue jay) | 25,00  |
| Mar---13 | BA 030 / Account number 0065/003 | Pears                     | Pick n Pay                         | 19,98  |
| Mar---13 | BA 030 / Account number 0065/003 | Pears                     | Pick n Pay                         | 9,99   |
| Mar---13 | BA 030 / Account number 0065/003 | Pears                     | Pick n Pay                         | 12,99  |
| Mar---13 | Farm to Fork / Guest House       | peas                      | Food Lovers Market                 | 59,98  |
| Mar---13 | umzi wethu                       | peas                      | Pick n Pay                         | 55,98  |
| Mar---13 | Farm to Fork / Guest House       | Peas                      | Shoprite                           | 26,99  |
| Mar---13 | Farm to Fork / Guest House       | peas & corn               | Pick n Pay                         | 31,99  |
| Mar---13 | Farm to Fork / Guest House       | peas & corn               | Pick n Pay                         | 127,96 |
| Mar---13 | Farm to Fork / Guest House       | Pepper                    | Shoprite                           | 26,32  |
| Mar---13 | Umzi                             | Peppers                   | Gardens and Grounds                | 15,00  |
| Mar---13 | Farm to Fork / Guest House       | Peppers                   | Gardens and Grounds                | 80,00  |
| Mar---13 | Farm to Fork / Guest House       | Peppers--- Green          | Food Lovers Market                 | 16,27  |
| Mar---13 | Farm to Fork / Guest House       | Peppers--- Green          | Pick n Pay                         | 21,29  |
| Mar---13 | umzi wethu                       | Peppers--- Green          | Pick n Pay                         | 9,75   |
| Mar---13 | Farm to Fork / Guest House       | Peppers--- Green          | Pick n Pay                         | 31,27  |
| Mar---13 | Farm to Fork / Guest House       | Peppers--- Green          | Shoprite                           | 13,99  |
| Mar---13 | Farm to Fork / Guest House       | Peppers--- red            | Food Lovers Market                 | 34,23  |
| Mar---13 | Farm to Fork / Guest House       | Peppers--- Red            | Pick n Pay                         | 17,07  |
| Mar---13 | umzi wethu                       | Peppers--- Red            | Pick n Pay                         | 15,00  |
| Mar---13 | umzi wethu                       | Peppers--- Red            | Pick n Pay                         | 16,91  |
| Mar---13 | Farm to Fork / Guest House       | peppers--- yellow         | Food Lovers Market                 | 37,43  |
| Mar---13 | Farm to Fork / Guest House       | Peppers--- Yellow         | Pick n Pay                         | 13,80  |
| Mar---13 | Farm to Fork / Guest House       | Pickl'd Onions            | Shoprite                           | 29,98  |
| Mar---13 | Farm to Fork / Guest House       | pilch in tom sauce        | Pick n Pay                         | 149,88 |
| Mar---13 | Farm to Fork / Guest House       | pilch in tom sauce        | Pick n Pay                         | 119,90 |
| Mar---13 | Farm to Fork / Guest House       | Pine Queen                | Shoprite                           | 59,94  |
| Mar---13 | Farm to Fork / Guest House       | Pineapple Jelly           | Pick n Pay                         | 5,98   |
| Mar---13 | BA 030 / Account number 0065/003 | Plums                     | Food Lovers Market                 | 55,93  |
| Mar---13 | BA 030 / Account number 0065/003 | plums                     | Pick n Pay                         | 47,96  |
| Mar---13 | Green Café                       | PNP Brown Sugar           | Pick n Pay                         | 11,99  |
| Mar---13 | Green Café                       | PNP Tuna Chunk            | Pick n Pay                         | 139,90 |
| Mar---13 | Farm to Fork / Guest House       | Potatoes                  | Gardens and Grounds                | 80,00  |
| Mar---13 | Farm to Fork / Guest House       | Potatoes                  | Gardens and Grounds                | 50,00  |
| Mar---13 | Farm to Fork                     | Potatoes                  | JWC Fruits and Veggies             | 150,00 |
| Mar---13 | Farm to Fork                     | Potatoes                  | JWC Fruits and Veggies             | 100,00 |
| Mar---13 | Farm to Fork                     | Potatoes                  | JWC Fruits and Veggies             | 200,00 |
| Mar---13 | umzi wethu                       | potatoes                  | Pick n Pay                         | 20,97  |
| Mar---13 | Farm to Fork                     | Premium Brown Bread Flour | Eureka Meulens                     | 174,30 |

|          |                            |   |                                    |        |
|----------|----------------------------|---|------------------------------------|--------|
| Mar---13 | Farm to Fork               | Premium Cake Flour  | Eureka Meulens                     | 367,84 |
| Mar---13 | Green Café                 | Processed Juices  | Juice Direct Winelands             | 195,60 |
| Mar---13 | Green Café                 | Processed Juices  | Timberlea Farming Trust            | 75,46  |
| Mar---13 | Green Café                 | Processed Juices  | Timberlea Farming Trust            | 53,90  |
| Mar---13 | Green Café                 | Processed Juices  | Timberlea Farming Trust (Blue Jay) | 31,00  |
| Mar---13 | Green Café                 | Processed Juices  | Timberlea Farming Trust (Blue Jay) | 138,80 |
| Mar---13 | Farm to Fork               | Processed Juices (apple, peach, guava, mango, seasonal, mixed fruit))     | Juice Direct Winelands             | 243,90 |
| Mar---13 | Farm to Fork               | Processed Juices (apple, peach, guava, mango, seasonal, mixed fruit))     | Juice Direct Winelands             | 401,45 |
| Mar---13 | Farm to Fork               | Processed Juices (apple, peach, guava, mango, seasonal, mixed fruit))     | Juice Direct Winelands             | 242,80 |
| Mar---13 | Farm to Fork               | Processed Juices (apple, peach, guava, mango, seasonal, mixed fruit))     | Timberlea Farming Trust            | 132,80 |
| Mar---13 | Farm to Fork               | Processed Juices (apple, guava, orange, fruit cocktail)                   | Juice Direct Winelands             | 240,50 |
| Mar---13 | Farm to Fork               | Processed Juices (apple, mango, orange, guava, seasonal)                  | Timberlea Farming Trust            | 85,90  |
| Mar---13 | Farm to Fork / Guest House | Prunes  | Shoprite                           | 43,99  |
| Mar---13 | umzi wethu                 | Raisins   | Pick n Pay                         | 48,99  |
| Mar---13 | UM001 /1306/000            | rajah mild & spicy  | Stellenbosch Cash and Carry        | 10,50  |
| Mar---13 | Farm to Fork / Guest House | Red Vienna  | Fairfield Meat Centre              | 20,95  |
| Mar---13 | Farm to Fork / Guest House | rice  | Shoprite                           | 53,99  |
| Mar---13 | Farm to Fork / Guest House | rice brown  | Pick n Pay                         | 88,14  |
| Mar---13 | Farm to Fork / Guest House | rice brown  | Pick n Pay                         | 88,14  |
| Mar---13 | Farm to Fork / Guest House | rice parboiled  | Pick n Pay                         | 42,99  |
| Mar---13 | UM001 /1306/000            | ricoffy   | Stellenbosch Cash and Carry        | 67,99  |
| Mar---13 | umzi wethu                 | s/dress creamy greek  | Pick n Pay                         | 16,99  |
| Mar---13 | umzi wethu                 | s/dress garlic/herb   | Pick n Pay                         | 16,99  |
| Mar---13 | umzi wethu                 | s/dress honey&must  | Pick n Pay                         | 16,99  |
| Mar---13 | Farm to Fork / Guest House | S/FRT&CUST YOG  | Pick n Pay                         | 16,99  |
| Mar---13 | Farm to Fork / Guest House | S/FRT&CUST YOG  | Pick n Pay                         | 16,79  |
| Mar---13 | Farm to Fork / Guest House | s/frt&cust yogurt   | Pick n Pay                         | 16,79  |
| Mar---13 | Farm to Fork / Guest House | Salad Bulk  | Pick n Pay                         | 22,49  |
| Mar---13 | Farm to Fork / Guest House | Salad Bulk  | Pick n Pay                         | 22,49  |
| Mar---13 | Farm to Fork / Guest House | Salt  | Shoprite                           | 5,98   |
| Mar---13 | Farm to Fork / Guest House | salt iodated  | Pick n Pay                         | 17,58  |
| Mar---13 | Farm to Fork / Guest House | Samoosa   | Shoprite                           | 36,99  |
| Mar---13 | Farm to Fork / Guest House | Samoosas  | Fairfield Meat Centre              | 89,90  |
| Mar---13 | UM001 /1306/000            | Sasko Brown Toastie   | Pick n Pay                         | 119,84 |
| Mar---13 | UM001 /1306/000            | Sasko Brown Toastie   | Pick n Pay                         | 97,37  |
| Mar---13 | UM001 /1306/000            | sasko cake flour  | Stellenbosch Cash and Carry        | 141,98 |
| Mar---13 | Farm to Fork / Guest House | Sausage Roll  | Shoprite                           | 47,99  |
| Mar---13 | Umzi Wethu                 | Sliced Proc Cheddar   | Pick n Pay                         | 29,99  |
| Mar---13 | Farm to Fork / Guest House | Smoked Viennas  | Shoprite                           | 24,99  |
| Mar---13 | Farm to Fork / Guest House | soup brown onion  | Pick n Pay                         | 13,96  |
| Mar---13 | Farm to Fork / Guest House | soup brown onion  | Pick n Pay                         | 13,96  |
| Mar---13 | Farm to Fork / Guest House | soup brown onion  | Pick n Pay                         | 17,45  |
| Mar---13 | UM001 /1306/000            | Soup Mutton & Vegetable   | Pick n Pay                         | 6,98   |
| Mar---13 | Farm to Fork / Guest House | soya mutton   | Shoprite                           | 41,94  |
| Mar---13 | UM001 /1306/000            | spagetti  | Stellenbosch Cash and Carry        | 79,98  |
| Mar---13 | Farm to Fork / Guest House | spaghetti   | Pick n Pay                         | 87,90  |
| Mar---13 | UM001 /1306/000            | spce4rice   | Stellenbosch Cash and Carry        | 19,98  |
| Mar---13 | UM001 /1306/000            | spekkorys   | Stellenbosch Cash and Carry        | 173,98 |
| Mar---13 | Farm to Fork / Guest House | Spinach   | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House | Spinach   | Gardens and Grounds                | 96,00  |
| Mar---13 | Farm to Fork / Guest House | Spinach   | Gardens and Grounds                | 36,00  |
| Mar---13 | Farm to Fork / Guest House | Spring Onions   | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House | Spring Onions   | Gardens and Grounds                | 36,00  |
| Mar---13 | UM001 /1306/000            | star bake yeast   | Stellenbosch Cash and Carry        | 50,99  |
| Mar---13 | Farm to Fork / Guest House | stock cubes beef  | Pick n Pay                         | 14,49  |
| Mar---13 | umzi wethu                 | stock cubes chicken   | Pick n Pay                         | 14,49  |
| Mar---13 | Farm to Fork / Guest House | Strawberry Jelly  | Pick n Pay                         | 8,97   |
| Mar---13 | Farm to Fork / Guest House | strawberry yogurth  | Pick n Pay                         | 16,99  |
| Mar---13 | Farm to Fork / Guest House | Sunflower Oil   | Pick n Pay                         | 86,99  |
| Mar---13 | Farm to Fork / Guest House | Sunflower Oil   | Shoprite                           | 12,95  |
| Mar---13 | Green Café                 | sunfoil cooking   | Pick n Pay                         | 29,99  |
| Mar---13 | Green Café                 | sunfoil cooking oil   | Pick n Pay                         | 29,99  |
| Mar---13 | Farm to Fork / Guest House | swedish peas  | Pick n Pay                         | 23,99  |
| Mar---13 | Farm to Fork / Guest House | sweet corn  | Pick n Pay                         | 32,99  |
| Mar---13 | Farm to Fork / Guest House | sweet corn&garden peas  | Pick n Pay                         | 26,99  |
| Mar---13 | Umzi                       | Sweet Potatoes  | Gardens and Grounds                | 30,00  |
| Mar---13 | Farm to Fork / Guest House | Sweet Potatoes  | Gardens and Grounds                | 60,00  |
| Mar---13 | Account 1306/001           | Sweetener   | Pick n Pay                         | 44,89  |
| Mar---13 | Farm to Fork / Guest House | swt corn&garden peas  | Pick n Pay                         | 107,96 |
| Mar---13 | Account 1306/001           | Tea Bags Tagless  | Pick n Pay                         | 37,99  |
| Mar---13 | Account 1306/001           | Teabags   | Pick n Pay                         | 42,99  |
| Mar---13 | Farm to Fork / Guest House | tomato sauce  | Pick n Pay                         | 89,19  |
| Mar---13 | Farm to Fork / Guest House | tomatoes  | Food Lovers Market                 | 25,98  |
| Mar---13 | Umzi                       | Tomatoes  | Gardens and Grounds                | 60,00  |
| Mar---13 | Farm to Fork / Guest House | Tomatoes  | Pick n Pay                         | 20,98  |
| Mar---13 | UM001 /1306/000            | tomatoes bulk pack  | Pick n Pay                         | 19,99  |
| Mar---13 | UM001 /1306/000            | Tomatoes English  | Pick n Pay                         | 20,98  |
| Mar---13 | Farm to Fork / Guest House | true lemon juice  | Pick n Pay                         | 59,96  |
| Mar---13 | umzi wethu                 | vegetable stock content   | Pick n Pay                         | 25,99  |
| Mar---13 | Lynedoch Primary School    | Veggies (Peppers, Wortels, Tamaties, Beet, Kool, Blaarslaai, Spanasie, Bu | Z?                                 | 485,00 |
| Mar---13 | UM001 /1306/000            | weet bix juice  | Stellenbosch Cash and Carry        | 88,99  |
| Mar---13 | UM001 /1306/000            | white starm/meal  | Stellenbosch Cash and Carry        | 63,99  |
| Mar---13 | Farm to Fork / Guest House | white sugar   | Pick n Pay                         | 53,99  |
| Mar---13 | Farm to Fork / Guest House | white sugar   | Shoprite                           | 53,99  |



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|----------|----------------------------|---------------------|-----------------------------|--------|
| Mar---13 | umzi wethu                 | whole chicken       | Pick n Pay                  | 61,18  |
| Mar---13 | umzi wethu                 | whole chicken       | Pick n Pay                  | 423,92 |
| Mar---13 | umzi wethu                 | windmeul eggs large | Pick n Pay                  | 29,99  |
| Mar---13 | Farm to Fork / Guest House | windmeul eggs large | Pick n Pay                  | 59,98  |
| Mar---13 | Farm to Fork / Guest House | yeast super bake    | Pick n Pay                  | 59,80  |
| Mar---13 | Green Café                 | yeast super bake    | Pick n Pay                  | 59,80  |
| Mar---13 | UM001 / 1306/000           | yum---yum smooth    | Stellenbosch Cash and Carry | 119,99 |

### FOOD PURCHASING AT THE SUSTAINABILITY INSTITUTE - - - APRIL 2013

| WHEN?    | WHO?                        | WHAT?                          | WHERE?                              | HOW MUCH?(ZAR) |
|----------|-----------------------------|--------------------------------|-------------------------------------|----------------|
| Apr---14 | BA030                       | Apples                         | Checkers                            | 39,98          |
| Apr---14 | BA030                       | Apples                         | Makro                               | 85,95          |
| Apr---14 | BA030                       | Apples                         | Makro                               | 21,99          |
| Apr---14 | BA030                       | Apples                         | Pick n Pay                          | 95,94          |
| Apr---14 | PR133                       | Apples                         | Pick n Pay                          | 33,32          |
| Apr---14 | PR120                       | Apples                         | Pick n Pay                          | 67,88          |
| Apr---14 | PR131                       | Apples                         | Pick n Pay                          | 33,34          |
| Apr---14 | PR120 Aftercare             | Apples                         | Pick n Pay                          | 24,99          |
| Apr---14 | BA030                       | Apples                         | Pick n Pay                          | 39,98          |
| Apr---14 | BA030                       | Apples                         | Pick n Pay                          | 94,45          |
| Apr---14 | PR130                       | Apples                         | Pick n Pay                          | 24,99          |
| Apr---14 | F2F food purchases 0760/000 | Apples                         | Super Spar                          | 37,99          |
| Apr---14 | UM001                       | Apples                         | Timberlea Farming Trust t/a Bluejay | 90,00          |
| Apr---14 | PR120 Aftercare             | Apples                         | Timberlea Farming Trust t/a Bluejay | 240,00         |
| Apr---14 | CR001                       | Apples                         | Timberlea Farming Trust t/a Bluejay | 230,00         |
| Apr---14 | F2F 0760/000                | Apricot jam                    | Shoprite                            | 29,98          |
| Apr---14 | PR131                       | Apricot jam                    | Pick n Pay                          | 18,99          |
| Apr---14 | PR130                       | Apricot jam                    | Pick n Pay                          | 18,99          |
| Apr---14 | F2F 0760/000                | Avocado                        | Shoprite                            | 19,96          |
| Apr---14 | F2F Food purchases 0760/002 | Avocado                        | Pick n Pay                          | 20,00          |
| Apr---14 | F2F Food purchases 0760/006 | Avocado                        | Pick n Pay                          | 20,00          |
| Apr---14 | F2F F2001                   | Avocado                        | Pick n Pay                          | 10,00          |
| Apr---14 | F2F 0760/000                | Avocado                        | Spar                                | 14,96          |
| Apr---14 | 041/000                     | Baby Marrow                    | Pick n Pay                          | 75,98          |
| Apr---14 | F2001 Farm to fork          | Baby marrows                   | JWC Fruit and Veggies               | 135,00         |
| Apr---14 | F2F Food purchases 0760/004 | Baby marrows                   | JWC Fruit and Veggies               | 130,00         |
| Apr---14 | F2F 0760/000                | Baking powder                  | Shoprite                            | 33,99          |
| Apr---14 | Creche                      | Baking powder                  | Makro                               | 13,98          |
| Apr---14 | F2F 0760/000                | Baking powder                  | Pick n Pay                          | 51,98          |
| Apr---14 | UM001                       | Bananas                        | Checkers                            | 24,99          |
| Apr---14 | BA030                       | Bananas                        | Makro                               | 17,96          |
| Apr---14 | BA030                       | Bananas                        | Pick n Pay                          | 83,94          |
| Apr---14 | BA030                       | Bananas                        | Pick n Pay                          | 33,98          |
| Apr---14 | F2F 0760/000                | Bananas                        | Pick n Pay                          | 18,26          |
| Apr---14 | BA030                       | Bananas                        | Pick n Pay                          | 59,97          |
| Apr---14 | PR130                       | Bananas                        | Pick n Pay                          | 89,97          |
| Apr---14 | F2F 0760/000                | Bananas                        | Pick n Pay                          | 21,88          |
| Apr---14 | F2F 0760/000                | Bananas                        | Spar                                | 9,56           |
| Apr---14 | F2F 0760/000                | Barley                         | Game                                | 41,94          |
| Apr---14 | UM001                       | Basil                          | Gardens and Grounds                 | 6,00           |
| Apr---14 | 041/000                     | Beans Frozen and cut           | Pick n Pay                          | 49,98          |
| Apr---14 | Umzi                        | Beans in tomato sauce          | Makro                               | 54,95          |
| Apr---14 | F2F 0760/000                | Beef mince                     | Karin Roxburgh                      | 293,88         |
| Apr---14 | PR120 Aftercare             | Beef mince                     | Karin Roxburgh                      | 240,82         |
| Apr---14 | PR120 Aftercare             | Beetroot                       | Pick n Pay                          | 71,92          |
| Apr---14 | UM007                       | Beetroot                       | Pick n Pay                          | 19,98          |
| Apr---14 | CR001                       | Beetroot                       | Fruit and Veg City                  | 49,95          |
| Apr---14 | Green Café                  | Biltong crisps (beed and kudu) | Rootstock Vegi Crips                | 501,04         |
| Apr---14 | F2F Food purchases 0760/003 | Blomkoal (unknown)             | JWC Fruit and Veggies               | 90,00          |
| Apr---14 | UM001                       | Boerwors sausage meat          | Checkers                            | 178,40         |
| Apr---14 | UM001                       | Bread                          | Checkers                            | 119,90         |
| Apr---14 | F2F 0760/000                | Bread                          | Zetlerbosch farm stall              | 20,00          |
| Apr---14 | F2F 0760/000                | Bread white                    | Pick n Pay                          | 35,95          |
| Apr---14 | F2F 0760/000                | Brinjals                       | Shoprite                            | 9,64           |
| Apr---14 | F2F Food purchases 0760/000 | Brinjals                       | Gardens and Grounds                 | 80,00          |
| Apr---14 | UM001                       | Brinjals                       | Gardens and Grounds                 | 30,00          |
| Apr---14 | F2F 0760/000                | Brinjals                       | Mini---Mark                         | 38,40          |
| Apr---14 | F2001 Farm to fork          | Brinjals                       | Nowo Organics                       | 100,00         |
| Apr---14 | F2001 Farm to fork          | Broccoli                       | JWC Fruit and Veggies               | 110,00         |
| Apr---14 | Creche                      | Broccoli                       | Makro                               | 37,98          |
| Apr---14 | PR120 Aftercare             | Broccoli                       | Pick n Pay                          | 31,98          |
| Apr---14 | F2004                       | Broccoli                       | Pick n Pay                          | 119,94         |
| Apr---14 | PR120 Aftercare             | Broccoli                       | Pick n Pay                          | 139,65         |
| Apr---14 | 1355/000                    | Broccoli                       | Pick n Pay                          | 47,97          |
| Apr---14 | PR130                       | Brown bread                    | Pick n Pay                          | 31,96          |
| Apr---14 | PR132                       | Brown bread                    | Pick n Pay                          | 23,97          |
| Apr---14 | UM001                       | Brown bread                    | Pick n Pay                          | 46,14          |
| Apr---14 | UM001                       | Brown bread                    | Pick n Pay                          | 79,90          |
| Apr---14 | PR130                       | Brown bread                    | Pick n Pay                          | 23,97          |
| Apr---14 | PR130                       | Brown bread                    | Pick n Pay                          | 23,97          |
| Apr---14 | UM001                       | Brown bread flour              | Eureka meulens                      | 87,15          |

|          |                             |                                |                        |          |
|----------|-----------------------------|--------------------------------|------------------------|----------|
| Apr---14 | UM005                       | brown breadSasko               | Pick n Pay             | 127,84   |
| Apr---14 | PR120Aftercare              | Brown bread Sasko              | Pick n Pay             | 23,97    |
| Apr---14 | Creche                      | Brown sugar                    | Makro                  | 152,95   |
| Apr---14 | OH020 Overheads             | Brown sugar                    | Pick n Pay             | 55,98    |
| Apr---14 | Green CaféGC000             | Brown sugar                    | Pick n Pay             | 67,98    |
| Apr---14 | Green café710/000           | Brown sugar                    | Pick n Pay             | 67,96    |
| Apr---14 | Overheads                   | Brown sugar                    | Pick n Pay             | 31,98    |
| Apr---14 | PR120Aftercare              | Buttenut                       | Pick n Pay             | 14,98    |
| Apr---14 | F2F 0760/000                | Butter                         | Shoprite               | 55,98    |
| Apr---14 | Green CaféGC002             | Butter                         | Makro                  | 61,98    |
| Apr---14 | PR132                       | Butter                         | Pick n Pay             | 19,99    |
| Apr---14 | PR120Aftercare              | Butter                         | Pick n Pay             | 19,99    |
| Apr---14 | F2003                       | Butter                         | Pick n Pay             | 191,94   |
| Apr---14 | Green CaféGC000             | Butter                         | Pick n Pay             | 179,94   |
| Apr---14 | CR001                       | Butternut                      | Fruit and Veg City     | 12,99    |
| Apr---14 | F2001 Farm to fork          | Butternut                      | JWC Fruit and Veggies  | 100,00   |
| Apr---14 | F2F Food purchases 0760/001 | Butternut                      | JWC Fruit and Veggies  | 150,00   |
| Apr---14 | Youth                       | Butternut                      | Makro                  | 49,95    |
| Apr---14 | PR120Aftercare              | Butternut                      | Pick n Pay             | 42,68    |
| Apr---14 | CR001                       | Butternut                      | Pick n Pay             | 46,45    |
| Apr---14 | 1355/000                    | Butternut                      | Pick n Pay             | 26,00    |
| Apr---14 | CR001                       | Cabbage                        | Fruit and Veg City     | 11,99    |
| Apr---14 | 041/000                     | Cabbage                        | Pick n Pay             | 155,88   |
| Apr---14 | F2F F2001                   | Cabbage                        | Pick n Pay             | 38,97    |
| Apr---14 | 1355/000                    | Cabbage                        | Pick n Pay             | 25,98    |
| Apr---14 | F2F 0760/000                | Cabbage                        | Zetlerbosch farm stall | 24,00    |
| Apr---14 | UM001                       | Cake flour                     | Eureka meulens         | 91,96    |
| Apr---14 | Youth                       | Califlower and Broccoli        | Makro                  | 74,95    |
| Apr---14 | F2F F2001                   | Canned tuna                    | Pick n Pay             | 29,98    |
| Apr---14 | CR001                       | Carrots                        | Fruit and Veg City     | 17,97    |
| Apr---14 | CR001                       | Carrots                        | Gardens and Grounds    | 32,00    |
| Apr---14 | F2F Food purchases 0760/000 | Carrots                        | Gardens and Grounds    | 200,00   |
| Apr---14 | UM001                       | Carrots                        | Gardens and Grounds    | 16,00    |
| Apr---14 | PR120Aftercare              | Carrots                        | Pick n Pay             | 117,94   |
| Apr---14 | CR001                       | Carrots                        | Pick n Pay             | 32,97    |
| Apr---14 | 1355/000                    | carrots                        | Pick n Pay             | 21,98    |
| Apr---14 | F2001 Farm to fork          | Cauliflower                    | JWC Fruit and Veggies  | 100,00   |
| Apr---14 | Creche                      | Cauliflower                    | Makro                  | 33,98    |
| Apr---14 | PR120Aftercare              | Cauliflower                    | Pick n Pay             | 47,97    |
| Apr---14 | F2008                       | Cauliflower                    | Pick n Pay             | 47,96    |
| Apr---14 | 1355/000                    | Cauliflower                    | Pick n Pay             | 21,98    |
| Apr---14 | F2F F2001                   | Cauliflower & Broccoli         | Pick n Pay             | 127,92   |
| Apr---14 | CR001                       | Cauliflower & Broccoli         | Pick n Pay             | 31,98    |
| Apr---14 | Umzi                        | Cereal Weet Bix/cornflakes     | Makro                  | 360,70   |
| Apr---14 | F2F 0760/000                | Cereal Weetbix                 | Shoprite               | 27,99    |
| Apr---14 | Youth                       | Cheddar cheese loaf            | Makro                  | 128,14   |
| Apr---14 | Green CaféGC001             | Cheddar cheese loaf            | Makro                  | 129,46   |
| Apr---14 | Umzi                        | Cheddar loaf                   | Makro                  | 135,02   |
| Apr---14 | F2F F2001                   | Cheddar loaf                   | Makro                  | 130,79   |
| Apr---14 | Creche                      | Cheddar loaf                   | Makro                  | 157,29   |
| Apr---14 | PR120Aftercare              | Cheddar loaf                   | Pick n Pay             | 196,88   |
| Apr---14 | F2F F2001                   | Cheddar loaf                   | Pick n Pay             | 99,19    |
| Apr---14 | F2F 0760/000                | Cheese                         | Shoprite               | 191,96   |
| Apr---14 | PR130                       | Cheese                         | Pick n Pay             | 38,97    |
| Apr---14 | F2F 0760/000                | Cheese platter                 | Spar                   | 3 554,60 |
| Apr---14 | PR120Aftercare              | Chick peas Canned              | Pick n Pay             | 99,90    |
| Apr---14 | 041/000                     | Chick peas canned              | Pick n Pay             | 119,88   |
| Apr---14 | Creche                      | Chicken                        | Makro                  | 77,50    |
| Apr---14 | F2F 0760/000                | Chicken breast                 | Karin Roxburgh         | 194,90   |
| Apr---14 | PR120Aftercare              | Chicken breast                 | Karin Roxburgh         | 389,80   |
| Apr---14 | Green CaféGC003             | Chicken breast                 | Makro                  | 75,13    |
| Apr---14 | F2F 0760/000                | Chicken cut                    | Pick n Pay             | 328,06   |
| Apr---14 | Umzi                        | Chicken liver frozen Rainbow   | Makro                  | 47,60    |
| Apr---14 | F2F 0760/000                | Chicken whole                  | Pick n Pay             | 77,28    |
| Apr---14 | Green Café                  | Choc & shortbread biscuits     | Papa's confectionary   | 470,00   |
| Apr---14 | UM001                       | Choclate & shortbread Biscuits | Papa's confectionary   | 470,00   |
| Apr---14 | UM001                       | CHS Portions ?                 | Checkers               | 77,97    |
| Apr---14 | UM001                       | Chutney                        | Checkers               | 26,97    |
| Apr---14 | Green CaféGC000             | Chutney                        | Pick n Pay             | 31,69    |
| Apr---14 | Umzi                        | Chutney sauce Mrs Balls        | Makro                  | 122,95   |
| Apr---14 | Creche                      | Chutney sauce Mrs Balls        | Makro                  | 89,90    |
| Apr---14 | F2F 0760/000                | Cinnamon                       | Pick n Pay             | 53,96    |
| Apr---14 | F2F 0760/000                | Cocoa powder                   | Shoprite               | 41,99    |
| Apr---14 | F2F 0760/000                | Coconut dessicated             | Shoprite               | 50,98    |
| Apr---14 | F2F 0760/000                | Condensed milk can             | Pick n Pay             | 47,96    |
| Apr---14 | Creche                      | Cooking oil                    | Makro                  | 61,50    |
| Apr---14 | GH001                       | Cooking oil                    | Pick n Pay             | 35,99    |
| Apr---14 | F2F 0760/000                | Cooking oil spray              | Pick n Pay             | 49,98    |
| Apr---14 | F2F 0760/000                | Coriander                      | Spar                   | 8,99     |
| Apr---14 | F2F 0760/000                | Corn cob                       | Shoprite               | 131,94   |
| Apr---14 | Creche                      | Corn creamed can               | Makro                  | 37,95    |
| Apr---14 | Creche                      | Corn fresh cob                 | Makro                  | 51,96    |
| Apr---14 | Umzi                        | Corn kernels canned            | Makro                  | 112,95   |
| Apr---14 | Youth                       | Corn kernels canned            | Makro                  | 91,95    |
| Apr---14 | PR120Aftercare              | Corn kernels canned            | Pick n Pay             | 283,71   |

|          |                             |  |                                     |        |
|----------|-----------------------------|--|-------------------------------------|--------|
| Apr---14 | F2F F2001                   | Corn kernels canned                            | Pick n Pay                          | 56,94  |
| Apr---14 | 1355/000                    | Corn kernels canned                            | Pick n Pay                          | 29,97  |
| Apr---14 | F2F 0760/000                | Corn kernels canned                            | Pick n Pay                          | 9,49   |
| Apr---14 | UM001                       | Corned meatcan                                 | Checkers                            | 70,92  |
| Apr---14 | Umzi                        | Corned meatcan                                 | Makro                               | 143,90 |
| Apr---14 | Green CaféGC000             | CP Lat Cheddar mini loaf                       | Pick n Pay                          | 120,46 |
| Apr---14 | F2F 0760/000                | Cream fresh                                    | Game                                | 54,95  |
| Apr---14 | F2F F2001                   | Cream fresh                                    | Pick n Pay                          | 52,20  |
| Apr---14 | F2F 0760/000                | Cream fresh                                    | Pick n Pay                          | 52,95  |
| Apr---14 | F2F 0760/000                | Cream fresh                                    | Pick n Pay                          | 39,96  |
| Apr---14 | UM001                       | Crisps   | Checkers                            | 29,90  |
| Apr---14 | UM002                       | Crushed ginger/garlic                          | Pick n Pay                          | 35,97  |
| Apr---14 | F2F 0760/000                | Cucumber                                       | Shoprite                            | 59,90  |
| Apr---14 | Umzi                        | Cucumber                                       | Makro                               | 13,98  |
| Apr---14 | Creche                      | Cucumber                                       | Makro                               | 13,98  |
| Apr---14 | F2009                       | Cucumber                                       | Pick n Pay                          | 35,70  |
| Apr---14 | F2F F2001                   | Cucumber                                       | Pick n Pay                          | 35,70  |
| Apr---14 | F2F 0760/000                | Cucumber                                       | Spar                                | 25,96  |
| Apr---14 | 1355/000                    | Cucumbers                                      | Pick n Pay                          | 10,00  |
| Apr---14 | F2F Food purchases 0760/010 | Cucumbers                                      | Zetlerbosch farm stall              | 15,00  |
| Apr---14 | F2F 0760/000                | Custard powder                                 | Shoprite                            | 17,99  |
| Apr---14 | Umzi                        | Custard powder                                 | Makro                               | 26,95  |
| Apr---14 | Creche                      | Custard powder                                 | Makro                               | 26,95  |
| Apr---14 | F2F 0760/000                | Custard powder                                 | Pick n Pay                          | 16,99  |
| Apr---14 | Creche                      | Desicated coconut                              | Makro                               | 37,90  |
| Apr---14 | UM001                       | Dried fruit cubes                              | Checkers                            | 69,98  |
| Apr---14 | Green Café                  | Eggs   | Homegrown free range eggs           | 106,00 |
| Apr---14 | Green Café                  | Eggs   | Homegrown free range eggs           | 106,00 |
| Apr---14 | F2F 0760/000                | Eggs cage                                      | Shoprite                            | 159,96 |
| Apr---14 | F2F 0760/000                | Eggs cage                                      | Game                                | 29,99  |
| Apr---14 | Umzi                        | Eggs cage                                      | Makro                               | 35,99  |
| Apr---14 | Youth                       | Eggs cage                                      | Makro                               | 23,99  |
| Apr---14 | Creche                      | Eggs cage                                      | Makro                               | 89,85  |
| Apr---14 | F2F Food purchases 0760/001 | Eggs cage                                      | Pick n Pay                          | 59,98  |
| Apr---14 | F2F 0760/000                | Eggs Cage                                      | Pick n Pay                          | 9,99   |
| Apr---14 | CR001                       | Eggs cage                                      | Pick n Pay                          | 91,98  |
| Apr---14 | F2F 0760/000                | Eggs free range                                | Homegrown free range eggs           | 265,00 |
| Apr---14 | Green CaféGC000             | Eggs free range                                | Pick n Pay                          | 41,99  |
| Apr---14 | UM001                       | Eggs free range                                | Pick n Pay                          | 83,98  |
| Apr---14 | F2012                       | Egss free range                                | Pick n Pay                          | 37,99  |
| Apr---14 | Guest House                 | Expresso coffee                                | Legado Coffee                       | 719,98 |
| Apr---14 | Green Café                  | Expresso coffee                                | Legado Coffee                       | 539,98 |
| Apr---14 | Green Café                  | Expresso coffee                                | Legado Coffee                       | 359,99 |
| Apr---14 | Green Café                  | Expresso coffee                                | Legado Coffee                       | 560,00 |
| Apr---14 | F2F 0760/000                | Family pack PAPA ?                             | Spar                                | 45,98  |
| Apr---14 | F2F 0760/000                | Fennel   | Shoprite                            | 11,99  |
| Apr---14 | Umzi                        | Feta Cheese                                    | Makro                               | 59,70  |
| Apr---14 | Youth                       | Feta Cheese                                    | Makro                               | 29,85  |
| Apr---14 | 041/000                     | Feta Cheese                                    | Pick n Pay                          | 32,99  |
| Apr---14 | F2F F2001                   | Feta Cheese                                    | Pick n Pay                          | 59,98  |
| Apr---14 | F2F 0760/000                | Flour  | Shoprite                            | 15,95  |
| Apr---14 | F2F Food purchases 0760/000 | Flour  | Eureka meulens                      | 566,82 |
| Apr---14 | Creche                      | Flour  | Makro                               | 33,90  |
| Apr---14 | CR001                       | Flour  | Pick n Pay                          | 15,79  |
| Apr---14 | Umzi                        | Flour  | Makro                               | 58,95  |
| Apr---14 | Aftercare                   | Flour cake                                     | Pick n Pay                          | 39,93  |
| Apr---14 | UM003                       | Free range eggs                                | Pick n Pay                          | 37,99  |
| Apr---14 | PR120 Aftercare             | Free range eggs                                | Pick n Pay                          | 41,99  |
| Apr---14 | F2F 0760/000                | Fresh cream                                    | Shoprite                            | 116,90 |
| Apr---14 | F2006                       | Fresh cream                                    | Pick n Pay                          | 23,98  |
| Apr---14 | PR120 Aftercare             | Frozen mixed veggies                           | Pick n Pay                          | 79,46  |
| Apr---14 | PR120 Aftercare             | Frozen veg mixed                               | Pick n Pay                          | 95,96  |
| Apr---14 | Green Café                  | Frozen Yogurt (toffee/choc.vanilla.strawberry) | Marcel's Frozen yogurt              | 866,40 |
| Apr---14 | F2F 0760/000                | Fruit unknown                                  | Timberlea Farming Trust t/a Bluejay | 20,00  |
| Apr---14 | CR001                       | Garlic   | Pick n Pay                          | 12,32  |
| Apr---14 | F2F 0760/000                | Garlic crushed                                 | Shoprite                            | 26,04  |
| Apr---14 | F2F 0760/000                | Garlic crushed                                 | Shoprite                            | 17,99  |
| Apr---14 | Youth                       | Garlic crushed                                 | Makro                               | 46,99  |
| Apr---14 | F2F 0760/000                | Ginger   | Shoprite                            | 15,92  |
| Apr---14 | CR001                       | Ginger   | Pick n Pay                          | 3,20   |
| Apr---14 | Umzi                        | Gouda loaf                                     | Makro                               | 129,73 |
| Apr---14 | F2001 Farm to fork          | Grapes   | JWC Fruit and Veggies               | 48,00  |
| Apr---14 | F2F 0760/000                | Grapes   | Pick n Pay                          | 50,05  |
| Apr---14 | F2F 0760/000                | Grapes   | Spar                                | 15,99  |
| Apr---14 | Groceries (0612/0000)       | Green beans                                    | Gardens and Grounds                 | 160,00 |
| Apr---14 | CR001                       | Green beans                                    | Gardens and Grounds                 | 120,00 |
| Apr---14 | F2F Food purchases 0760/000 | Green beans                                    | Gardens and Grounds                 | 140,00 |
| Apr---14 | UM001                       | Green beans                                    | Gardens and Grounds                 | 30,00  |
| Apr---14 | F2001 Farm to fork          | Green peppers                                  | JWC Fruit and Veggies               | 40,00  |
| Apr---14 | Green café GC000            | Hot chocolate powder                           | Pick n Pay                          | 134,97 |
| Apr---14 | F2F 0760/000                | Ice  | Spar                                | 22,99  |
| Apr---14 | F2F Food purchases 0760/003 | Ice cubes                                      | Pick n Pay                          | 53,94  |
| Apr---14 | Creche                      | Icing sugar                                    | Makro                               | 45,90  |
| Apr---14 | Overheads                   | Instant coffee                                 | Pick n Pay                          | 59,99  |

|          |                             |                                  |                                     |        |
|----------|-----------------------------|----------------------------------|-------------------------------------|--------|
| Apr---14 | OH020 Overheads             | Instant coffee ricoffy           | Pick n Pay                          | 127,98 |
| Apr---14 | F2F F2001                   | Instant coffee ricoffy           | Pick n Pay                          | 57,99  |
| Apr---14 | F2F 0760/000                | Jeera ?                          | Shoprite                            | 15,98  |
| Apr---14 | UM005                       | Jelly lollies                    | Pick n Pay                          | 16,76  |
| Apr---14 | Green Café                  | Juice                            | Timberlea Farming Trust t/a Bluejay | 105,74 |
| Apr---14 | F2F Food purchases 0760/000 | Juice (mango/apple/orange/guava) | Timberlea Farming Trust t/a Bluejay | 288,72 |
| Apr---14 | F2F Food purchases 0760/000 | Juice apple                      | Juice direct winelands              | 193,30 |
| Apr---14 | F2F 0760/000                | Juice Apple/guava etc.           | Juice direct winelands              | 243,90 |
| Apr---14 | Umzi                        | Juice concentrate                | Makro                               | 215,90 |
| Apr---14 | Creche                      | Juice concentrate                | Makro                               | 125,95 |
| Apr---14 | F2001 Farm to fork          | Juice, apple/guava/tropical      | Juice direct winelands              | 490,10 |
| Apr---14 | UM002                       | Lamb                             | Pick n Pay                          | 201,08 |
| Apr---14 | UM001                       | Lamb                             | Pick n Pay                          | 211,22 |
| Apr---14 | F2F Food purchases 0760/010 | Lamb whole                       | Poormans' Friends Halaal meat emp   | 590,00 |
| Apr---14 | UM001                       | Lemon soft drink                 | Checkers                            | 14,99  |
| Apr---14 | Guest House                 | Lemons                           | Food Lover's market                 | 30,66  |
| Apr---14 | Youth                       | Lentils dried                    | Makro                               | 89,99  |
| Apr---14 | Creche                      | Lentils dried                    | Makro                               | 81,95  |
| Apr---14 | PR120 Aftercare             | Lentils dried                    | Pick n Pay                          | 304,36 |
| Apr---14 | Green Café GC000            | Lentils dried                    | Pick n Pay                          | 119,88 |
| Apr---14 | CR001                       | Lentils dried                    | Pick n Pay                          | 29,97  |
| Apr---14 | Umzi                        | Lettuce                          | Makro                               | 25,98  |
| Apr---14 | Creche                      | Lettuce                          | Makro                               | 25,98  |
| Apr---14 | 1355/000                    | Lettuce                          | Pick n Pay                          | 21,98  |
| Apr---14 | F2F 0760/000                | Lettuce                          | Pick n Pay                          | 37,43  |
| Apr---14 | F2F 0760/000                | lettuce                          | Spar                                | 10,99  |
| Apr---14 | F2F 0760/000                | Lettuce                          | Zetlerbosch farm stall              | 68,70  |
| Apr---14 | F2F 0760/000                | Lion Sago                        | Pick n Pay                          | 49,95  |
| Apr---14 | PR130                       | Liver spread                     | Pick n Pay                          | 35,96  |
| Apr---14 | UM001                       | Magarine                         | Checkers                            | 25,98  |
| Apr---14 | Creche                      | Maize meal                       | Makro                               | 48,95  |
| Apr---14 | CR001                       | Maize meal                       | Pick n Pay                          | 24,97  |
| Apr---14 | F2F 0760/000                | Margarine                        | Shoprite                            | 111,92 |
| Apr---14 | Umzi                        | Margarine                        | Makro                               | 79,80  |
| Apr---14 | Creche                      | Margarine                        | Makro                               | 29,80  |
| Apr---14 | F2F Food purchases 0760/004 | Margarine                        | Pick n Pay                          | 90,93  |
| Apr---14 | 1355/000                    | Margarine                        | Pick n Pay                          | 13,98  |
| Apr---14 | F2F 0760/000                | Mayonaise                        | Shoprite                            | 77,98  |
| Apr---14 | Umzi                        | Mayonaise                        | Makro                               | 98,95  |
| Apr---14 | Creche                      | Mayonaise                        | Makro                               | 29,95  |
| Apr---14 | F2F 0760/000                | Mayonaise                        | Pick n Pay                          | 37,99  |
| Apr---14 | F2F F2001                   | Mayonaise                        | Pick n Pay                          | 44,49  |
| Apr---14 | Green café 710/000          | Mayonaise                        | Pick n Pay                          | 44,49  |
| Apr---14 | 1355/000                    | Mayonaise                        | Pick n Pay                          | 16,79  |
| Apr---14 | CR001                       | Mayonaise                        | Pick n Pay                          | 35,98  |
| Apr---14 | F2F 0760/000                | Melon                            | Pick n Pay                          | 33,98  |
| Apr---14 | UM001                       | Milk                             | Pick n Pay                          | 23,39  |
| Apr---14 | CR001                       | Milk                             | Pick n Pay                          | 91,98  |
| Apr---14 | Overheads                   | Milk long life                   | Pick n Pay                          | 152,97 |
| Apr---14 | OH020 Overheads             | Milk Long life                   | Pick n Pay                          | 203,96 |
| Apr---14 | Umzi                        | Milk Long life First Choice      | Makro                               | 249,75 |
| Apr---14 | Youth                       | Milk Long life First Choice      | Makro                               | 49,95  |
| Apr---14 | Green Café GC000            | Milk Long life First Choice      | Makro                               | 249,75 |
| Apr---14 | Creche                      | Milk Long life First Choice      | Makro                               | 215,80 |
| Apr---14 | Guest House                 | Mint                             | Gardens and Grounds                 | 20,00  |
| Apr---14 | CR001                       | Mixed combo vegetables ?         | Fruit and Veg City                  | 100,00 |
| Apr---14 | Green Café                  | Mixed fruit                      | Timberlea Farming Trust t/a Bluejay | 38,00  |
| Apr---14 | F2F Food purchases 0760/000 | Mixed Lettuce                    | Gardens and Grounds                 | 156,00 |
| Apr---14 | UM001                       | Mixed Lettuce                    | Gardens and Grounds                 | 33,00  |
| Apr---14 | F2001 Farm to fork          | Mixed lettuce                    | Nowo Organics                       | 650,00 |
| Apr---14 | Green Café                  | Mixed Vegi Crips                 | Rootstock Vegi Crips cc             | 312,99 |
| Apr---14 | Creche                      | Muffin flour premix              | Makro                               | 33,98  |
| Apr---14 | 1355/000                    | Muffin flour premix              | Pick n Pay                          | 19,98  |
| Apr---14 | F2F 0760/000                | Museli                           | Shoprite                            | 29,99  |
| Apr---14 | F2F 0760/000                | Mushroom                         | Pick n Pay                          | 33,59  |
| Apr---14 | F2F 0760/000                | Mushroom soup powder             | Pick n Pay                          | 13,16  |
| Apr---14 | F2F Food purchases 0760/010 | Mushrooms                        | Shoprite                            | 33,98  |
| Apr---14 | F2F 0760/000                | Mushrooms                        | Game                                | 59,94  |
| Apr---14 | F2F F2003                   | Mushrooms                        | Makro                               | 25,98  |
| Apr---14 | F2007                       | Mushrooms                        | Pick n Pay                          | 53,97  |
| Apr---14 | UM001                       | Mushrooms                        | Pick n Pay                          | 73,93  |
| Apr---14 | GH000                       | Mushrooms                        | Pick n Pay                          | 43,98  |
| Apr---14 | Green Café GC000            | Mustard                          | Pick n Pay                          | 106,26 |
| Apr---14 | Umzi                        | Nescafe instant coffee           | Makro                               | 56,95  |
| Apr---14 | F2F F2002                   | Nescafe instant coffee           | Makro                               | 56,95  |
| Apr---14 | Guest House                 | Nescafe instant coffee           | Pick n Pay                          | 99,58  |
| Apr---14 | F2F 0760/000                | Nestle 2L farm vanilla ?         | Game                                | 57,98  |
| Apr---14 | Creche                      | Oats                             | Makro                               | 64,47  |
| Apr---14 | Green Café GC000            | Oats                             | Pick n Pay                          | 67,96  |
| Apr---14 | 1355/000                    | Oats                             | Pick n Pay                          | 84,95  |
| Apr---14 | CR001                       | Oats no name                     | Pick n Pay                          | 50,97  |
| Apr---14 | F2001 Farm to fork          | Onion                            | JWC Fruit and Veggies               | 75,00  |
| Apr---14 | CR001                       | Onion                            | Pick n Pay                          | 5,98   |
| Apr---14 | F2F 0760/000                | Onion                            | Spar                                | 7,38   |

|          |                             |                           |                                     |        |
|----------|-----------------------------|---------------------------|-------------------------------------|--------|
| Apr---14 | F2F Food purchases 0760/002 | Onions                    | JWC Fruit and Vegs                  | 50,00  |
| Apr---14 | Umzi                        | Onions                    | Makro                               | 46,99  |
| Apr---14 | Youth                       | Onions                    | Makro                               | 46,99  |
| Apr---14 | F2F Food purchases 0760/010 | Onions                    | Pick n Pay                          | 49,95  |
| Apr---14 | PR120 Aftercare             | Onions                    | Pick n Pay                          | 54,99  |
| Apr---14 | F2F 0760/000                | Oranges                   | Spar                                | 5,99   |
| Apr---14 | F2F food purchases 0760/000 | Oranges                   | Super Spar                          | 37,99  |
| Apr---14 | Umzi                        | Parsley                   | Makro                               | 23,50  |
| Apr---14 | F2F 0760/000                | Parsley                   | Pick n Pay                          | 14,98  |
| Apr---14 | F2F 0760/000                | Pasta                     | Shoprite                            | 119,85 |
| Apr---14 | Umzi                        | Pasta                     | Makro                               | 262,72 |
| Apr---14 | Youth                       | Pasta                     | Makro                               | 269,65 |
| Apr---14 | Creche                      | Pasta                     | Makro                               | 89,50  |
| Apr---14 | PR120 Aftercare             | Pasta                     | Pick n Pay                          | 167,76 |
| Apr---14 | 1355/000                    | Pasta                     | Pick n Pay                          | 34,95  |
| Apr---14 | F2F 0760/000                | pasta                     | Spar                                | 98,97  |
| Apr---14 | PR120 Aftercare             | Pasta Macaroni            | Pick n Pay                          | 83,88  |
| Apr---14 | PR120 Aftercare             | Pasta spaghetti           | Pick n Pay                          | 105,48 |
| Apr---14 | F2010                       | Pawpaw                    | Pick n Pay                          | 64,32  |
| Apr---14 | UM004                       | Peach halves              | Pick n Pay                          | 39,96  |
| Apr---14 | BA030                       | Peaches                   | Makro                               | 77,18  |
| Apr---14 | BA030                       | Peaches                   | Pick n Pay                          | 26,26  |
| Apr---14 | F2F 0760/000                | peaches                   | Pick n Pay                          | 28,13  |
| Apr---14 | Umzi                        | Peanut butter             | Makro                               | 101,95 |
| Apr---14 | Creche                      | Peanut butter             | Makro                               | 37,95  |
| Apr---14 | UM001                       | Peanuts + raisins         | Checkers                            | 41,99  |
| Apr---14 | BA030                       | Pears                     | Checkers                            | 14,99  |
| Apr---14 | PR120                       | Pears                     | Pick n Pay                          | 35,98  |
| Apr---14 | PR120 Aftercare             | Pears                     | Timberlea Farming Trust t/a Bluejay | 80,00  |
| Apr---14 | CR001                       | Pears                     | Timberlea Farming Trust t/a Bluejay | 70,00  |
| Apr---14 | O41/000                     | Peas                      | Pick n Pay                          | 27,99  |
| Apr---14 | F2F F2001                   | Peas & corn frozen        | Pick n Pay                          | 127,92 |
| Apr---14 | F2F 0760/000                | Peas and corn frozen      | Pick n Pay                          | 63,98  |
| Apr---14 | PR120 Aftercare             | Peas frozen               | Pick n Pay                          | 111,96 |
| Apr---14 | Umzi                        | Peas frozen McCains       | Makro                               | 42,90  |
| Apr---14 | Youth                       | Peas frozen McCains       | Makro                               | 21,45  |
| Apr---14 | PR120 Aftercare             | Peaut butter              | Pick n Pay                          | 43,99  |
| Apr---14 | F2F 0760/000                | Peppercorns               | Shoprite                            | 67,97  |
| Apr---14 | UM001                       | Peppers                   | Gardens and Grounds                 | 30,00  |
| Apr---14 | Umzi                        | Peppers                   | Makro                               | 53,98  |
| Apr---14 | Youth                       | Peppers                   | Makro                               | 80,97  |
| Apr---14 | Creche                      | Peppers                   | Makro                               | 53,98  |
| Apr---14 | F2F Food purchases 0760/001 | Peppers                   | Pick n Pay                          | 17,56  |
| Apr---14 | UM006                       | Peppers                   | Pick n Pay                          | 70,47  |
| Apr---14 | PR120 Aftercare             | Peppers                   | Pick n Pay                          | 118,04 |
| Apr---14 | UM003                       | Peppers                   | Pick n Pay                          | 45,98  |
| Apr---14 | F2F 0760/000                | peppers                   | Pick n Pay                          | 68,91  |
| Apr---14 | PR120 Aftercare             | Peppers                   | Pick n Pay                          | 34,42  |
| Apr---14 | UM001                       | Peppers                   | Pick n Pay                          | 42,75  |
| Apr---14 | 1355/000                    | Peppers                   | Pick n Pay                          | 48,98  |
| Apr---14 |                             | Peppers                   | Spar                                | 45,45  |
| Apr---14 | CR001                       | Pichards canned           | Pick n Pay                          | 55,80  |
| Apr---14 | Umzi                        | Pilchards canned Saldanha | Makro                               | 136,95 |
| Apr---14 | Youth                       | Pilchards canned Saldanha | Makro                               | 136,95 |
| Apr---14 | Creche                      | Pilchards canned Saldanha | Makro                               | 136,95 |
| Apr---14 | F2F Food purchases 0760/002 | Pineapple                 | Pick n Pay                          | 41,12  |
| Apr---14 | F2F 0760/000                | Pineapple                 | Pick n Pay                          | 13,90  |
| Apr---14 | F2F F2001                   | Pineapple                 | Pick n Pay                          | 13,98  |
| Apr---14 | F2F 0760/000                | Pineapple                 | Pick n Pay                          | 6,99   |
| Apr---14 | F2F 0760/000                | Pineapple                 | Spar                                | 31,96  |
| Apr---14 | F2F 0760/000                | Plums                     | Shoprite                            | 47,96  |
| Apr---14 | BA030                       | Plums                     | Makro                               | 18,61  |
| Apr---14 | BA030                       | Plums                     | Pick n Pay                          | 12,02  |
| Apr---14 | F2F 0760/000                | Plums                     | Pick n Pay                          | 24,43  |
| Apr---14 | Guest House                 | PnP brown sugar           | Pick n Pay                          | 66,98  |
| Apr---14 | Umzi                        | Potato                    | Makro                               | 119,07 |
| Apr---14 | Youth                       | Potato                    | Makro                               | 39,99  |
| Apr---14 | CR001                       | Potatoes                  | Bergstedt Fruit and veg             | 26,00  |
| Apr---14 | F2001 Farm to fork          | Potatoes                  | JWC Fruit and Vegs                  | 350,00 |
| Apr---14 | CR001                       | Potatoes                  | Pick n Pay                          | 8,10   |
| Apr---14 | 1355/000                    | potatoes                  | Pick n Pay                          | 69,98  |
| Apr---14 | PR120 Aftercare             | Potatoes washed           | Pick n Pay                          | 21,95  |
| Apr---14 | F2013                       | Potatoes washed           | Pick n Pay                          | 110,97 |
| Apr---14 | UM001                       | Provita wheat             | Checkers                            | 124,95 |
| Apr---14 | F2F Food purchases 0760/000 | Raddish                   | Gardens and Grounds                 | 15,00  |
| Apr---14 | UM001                       | Raddish                   | Gardens and Grounds                 | 20,00  |
| Apr---14 | UM004                       | Rainbow Chicken liver     | Pick n Pay                          | 29,96  |
| Apr---14 | F2F 0760/000                | Rice                      | Game                                | 20,99  |
| Apr---14 | Youth                       | Rice                      | Makro                               | 61,95  |
| Apr---14 | PR120 Aftercare             | Rice                      | Pick n Pay                          | 38,99  |
| Apr---14 | F2F F2001                   | Rice                      | Pick n Pay                          | 38,99  |
| Apr---14 | Creche                      | Rice brown                | Makro                               | 119,60 |
| Apr---14 | Green Café GC000            | Rice brown                | Pick n Pay                          | 58,76  |
| Apr---14 | 1355/000                    | rice brown                | Pick n Pay                          | 72,45  |

|          |                             |  |                                      |        |
|----------|-----------------------------|--|--------------------------------------|--------|
| Apr---14 | F2F Food purchases 0760/009 | Rice no name                                   | Pick n Pay                           | 39,99  |
| Apr---14 | PR120Aftercare              | Rice parboiled                                 | Pick n Pay                           | 85,98  |
| Apr---14 | Green Café                  | Rusks  | Ticklemouse Country Fare             | 430,92 |
| Apr---14 | Umzi                        | Salad Dressing ---Steers                       | Makro                                | 29,90  |
| Apr---14 | UM001                       | Salt   | Pick n Pay                           | 8,79   |
| Apr---14 | F2001                       | Salt   | Pick n Pay                           | 17,58  |
| Apr---14 | CR001                       | Salt   | Pick n Pay                           | 8,97   |
| Apr---14 | F2F 0760/000                | Salt   | Spar                                 | 17,18  |
| Apr---14 | F2F F2001                   | Salt   | Pick n Pay                           | 41,98  |
| Apr---14 | Green CaféGC000             | Salt and pepper                                | Pick n Pay                           | 62,96  |
| Apr---14 | UM001                       | Sardines canned                                | Checkers                             | 77,94  |
| Apr---14 | F2002                       | Seasoning                                      | Pick n Pay                           | 122,94 |
| Apr---14 | Green CaféGC000             | Seasoning                                      | Pick n Pay                           | 266,42 |
| Apr---14 | PR120Aftercare              | Seasoning                                      | Pick n Pay                           | 29,98  |
| Apr---14 | PR120Aftercare              | Seasoning                                      | Pick n Pay                           | 70,96  |
| Apr---14 | 1355/000                    | Seasoning                                      | Pick n Pay                           | 40,98  |
| Apr---14 | Umzi                        | Seasoning                                      | Makro                                | 101,93 |
| Apr---14 | F2F Food purchases 0760/000 | Seasoning                                      | Pick n Pay                           | 102,32 |
| Apr---14 | F2F 0760/000                | Seasoning /spices                              | Shoprite                             | 32,97  |
| Apr---14 | Youth                       | Seasoning and spices                           | Makro                                | 146,25 |
| Apr---14 | CR001                       | Seasoning and spices                           | Pick n Pay                           | 47,77  |
| Apr---14 | OH020 Overheads             | Snoek  | Food Lover's market                  | 240,27 |
| Apr---14 | UM001                       | Souppowder                                     | Checkers                             | 142,87 |
| Apr---14 | Youth                       | Souppowder                                     | Makro                                | 3,95   |
| Apr---14 | PR120Aftercare              | Souppowder                                     | Pick n Pay                           | 13,96  |
| Apr---14 | F2F 0760/000                | Souppowder                                     | Spar                                 | 25,83  |
| Apr---14 | 041/000                     | Spices garam masala                            | Pick n Pay                           | 69,21  |
| Apr---14 | Guest House                 | Spunasi  | Gardens and Grounds                  | 120,00 |
| Apr---14 | F2F Food purchases 0760/000 | Spunasi  | Gardens and Grounds                  | 150,00 |
| Apr---14 | Umzi                        | Steers dressing                                | Makro                                | 29,90  |
| Apr---14 | Umzi                        | Stock cubes                                    | Makro                                | 266,55 |
| Apr---14 | F2F 0760/000                | Strawberries                                   | Timberlea Farming Trust t/a Bluejay  | 12,00  |
| Apr---14 | CR001                       | Sugar brown                                    | Pick n Pay                           | 35,98  |
| Apr---14 | F2F 0760/000                | Sugar white                                    | Shoprite                             | 53,95  |
| Apr---14 | F2F 0760/000                | Sugar white                                    | Game                                 | 22,99  |
| Apr---14 | F2F 0760/000                | Sunflower oil                                  | Shoprite                             | 71,98  |
| Apr---14 | Umzi                        | Sunflower oil                                  | Makro                                | 96,95  |
| Apr---14 | Youth                       | Sunflower oil                                  | Makro                                | 33,95  |
| Apr---14 | Green CaféGC000             | Sunflower oil                                  | Pick n Pay                           | 85,99  |
| Apr---14 | Green café GC000            | Sunflower oil                                  | Pick n Pay                           | 35,99  |
| Apr---14 | PR120Aftercare              | Sunflower oil                                  | Pick n Pay                           | 35,99  |
| Apr---14 | Guest House                 | Sweet potatoes                                 | Gardens and Grounds                  | 100,00 |
| Apr---14 | Groceries (0612/0000)       | Sweet potatoes                                 | Gardens and Grounds                  | 100,00 |
| Apr---14 | CR001                       | Sweet potatoes                                 | Gardens and Grounds                  | 40,00  |
| Apr---14 | Green Café                  | Tea bags (blend/honey bush/lemon grass/lippia) | ASNAPP (Agribusiness innSustainable) | 120,00 |
| Apr---14 | Guest House                 | Teabags  | Pick n Pay                           | 37,99  |
| Apr---14 | OH020 Overheads             | Teabags  | Pick n Pay                           | 42,99  |
| Apr---14 | Green CaféGC000             | Teabags  | Pick n Pay                           | 80,98  |
| Apr---14 | F2F 0760/000                | Teabags  | Pick n Pay                           | 37,99  |
| Apr---14 | 041/000                     | teabags  | Pick n Pay                           | 41,99  |
| Apr---14 | Green café GC000            | Teabags  | Pick n Pay                           | 161,14 |
| Apr---14 | F2F 0760/000                | Tomato   | Shoprite                             | 38,97  |
| Apr---14 | F2F 0760/000                | Tomato paste                                   | Shoprite                             | 59,92  |
| Apr---14 | Umzi                        | Tomato paste                                   | Makro                                | 64,95  |
| Apr---14 | 041/000                     | Tomato paste                                   | Pick n Pay                           | 143,76 |
| Apr---14 | F2F F2001                   | Tomato paste                                   | Pick n Pay                           | 23,96  |
| Apr---14 | Green CaféGC000             | Tomato sauce                                   | Pick n Pay                           | 39,19  |
| Apr---14 | PR120                       | Tomatoes                                       | Food Lover's market                  | 104,97 |
| Apr---14 | F2001 Farm to fork          | Tomatoes                                       | JWC Fruit and Veggies                | 70,00  |
| Apr---14 | F2F Food purchases 0760/005 | Tomatoes                                       | JWC Fruit and Veggies                | 50,00  |
| Apr---14 | Umzi                        | Tomatoes                                       | Makro                                | 19,98  |
| Apr---14 | Youth                       | Tomatoes                                       | Makro                                | 19,98  |
| Apr---14 | F2F Food purchases 0760/000 | Tomatoes                                       | Pick n Pay                           | 16,99  |
| Apr---14 | PR120Aftercare              | Tomatoes                                       | Pick n Pay                           | 25,98  |
| Apr---14 | F2F Food purchases 0760/005 | Tomatoes                                       | Pick n Pay                           | 15,49  |
| Apr---14 | Green CaféGC000             | Tomatoes                                       | Pick n Pay                           | 19,99  |
| Apr---14 | F2005                       | Tomatoes                                       | Pick n Pay                           | 25,98  |
| Apr---14 | UM006                       | Tomatoes                                       | Pick n Pay                           | 25,98  |
| Apr---14 | Green CaféGC000             | Tomatoes                                       | Pick n Pay                           | 25,98  |
| Apr---14 | F2F 0760/000                | Tomatoes                                       | Pick n Pay                           | 103,60 |
| Apr---14 | PR120Aftercare              | Tomatoes                                       | Pick n Pay                           | 29,98  |
| Apr---14 | UM001                       | Tomatoes                                       | Pick n Pay                           | 29,99  |
| Apr---14 | 1355/000                    | Tomatoes                                       | Pick n Pay                           | 28,98  |
| Apr---14 | F2F 0760/000                | Tuna canned                                    | Pick n Pay                           | 13,99  |
| Apr---14 | F2F 0760/000                | Unknown  | Shoprite                             | 28,11  |
| Apr---14 | F2F Food purchases 0760/000 | Unknown  | JWC Fruit and Veggies                | 150,00 |
| Apr---14 | F2F 0760/000                | Unknown  | Timberlea Farming Trust t/a Bluejay  | 48,00  |
| Apr---14 | 1355/000                    | Vanilla essence                                | Pick n Pay                           | 12,79  |
| Apr---14 | F2F 0760/000                | Vinegar  | Pick n Pay                           | 29,38  |
| Apr---14 | F2F 0760/000                | Vinegar  | Spar                                 | 31,98  |
| Apr---14 | PR120Aftercare              | Vinegar white                                  | Pick n Pay                           | 14,99  |
| Apr---14 | F2011                       | White sugar                                    | Pick n Pay                           | 53,99  |
| Apr---14 | Green CaféGC000             | White sugar                                    | Pick n Pay                           | 53,99  |
| Apr---14 | F2F Food purchases 0760/008 | White Sugar                                    | Pick n Pay                           | 53,99  |

|          |                             |                     |                     |        |
|----------|-----------------------------|---------------------|---------------------|--------|
| Apr---14 | PR120Aftercare              | White Sugar Hullets | Pick n Pay          | 43,30  |
| Apr---14 | Green Café                  | Whole meal Flour    | Eureka Meulens      | 173,98 |
| Apr---14 | F2F 0760/000                | Willington?         | Shoprite            | 78,99  |
| Apr---14 | Guest House                 | Wortells            | Gardens and Grounds | 80,00  |
| Apr---14 | F2F Food purchases 0760/000 | Wortels             | Gardens and Grounds | 40,00  |
| Apr---14 | 041/000                     | Yeast instant dry   | Pick n Pay          | 41,88  |
| Apr---14 | Green Café GC000            | Yeast instant dry   | Pick n Pay          | 41,88  |
| Apr---14 | Green café 710/000          | Yeast instant dry   | Pick n Pay          | 59,98  |
| Apr---14 | Green Café GC000            | Yogurt              | Pick n Pay          | 56,97  |

### FOOD PURCHASING AT THE SUSTAINABILITY INSTITUTE - - - MAY 2013

| WHEN?   | WHO?                | WHAT?                        | WHERE?                              | HOW MUCH?(ZAR) |
|---------|---------------------|------------------------------|-------------------------------------|----------------|
| May--14 | PR130               | Apples                       | Fruit and veg City                  | 53,94          |
| May--14 | BA030               | Apples                       | Fruit and veg City                  | 45,00          |
| May--14 | BA/030              | Apples                       | Makro                               | 75,00          |
| May--14 | BA030               | Apples                       | Pick n Pay                          | 179,88         |
| May--14 | PR130               | Apples                       | Pick n Pay                          | 24,99          |
| May--14 | BA030               | Apples                       | Pick n Pay                          | 13,99          |
| May--14 | BA030               | Apples                       | Pick n Pay                          | 24,99          |
| May--14 | PR130               | Apples                       | Pick n Pay                          | 88,94          |
| May--14 | BA030               | Apples                       | Pick n Pay                          | 29,98          |
| May--14 | UM001               | Apples                       | Timberlea Farming Trust t/a Bluejay | 170,00         |
| May--14 | PR120Aftercare      | Apples                       | Timberlea Farming Trust t/a Bluejay | 120,00         |
| May--14 | BA030               | Apples                       | Pick n Pay                          | 12,50          |
| May--14 | F2F F760/0000       | Apricot Jam                  | Checkers                            | 29,98          |
| May--14 | F2F F760/0000       | Avocado                      | Pick n Pay                          | 20,00          |
| May--14 | PR120Aftercare      | Baby marrow                  | Checkers                            | 115,96         |
| May--14 | F2001               | Baby marrow                  | Garden and grounds                  | 12,00          |
| May--14 | UM001               | Baby marrow                  | JWC Fruit and Veg                   | 100,00         |
| May--14 | F2F 0760/000        | Baby Marrow                  | JWC Fruit and Veg                   | 135,00         |
| May--14 | F2F 0760/000        | Baby marrows                 | JWC Fruit and Veg                   | 50,00          |
| May--14 | UM001               | Balsamic vinegar             | Pick n Pay                          | 26,79          |
| May--14 | UM001               | Bambanani Braai ?            | Makro                               | 89,70          |
| May--14 | BA/030              | Banana                       | Makro                               | 20,00          |
| May--14 | F2F F2001           | Banana                       | Pick n Pay                          | 25,84          |
| May--14 | BA030               | Banana                       | Pick n Pay                          | 111,92         |
| May--14 | BA031               | Banana                       | Pick n Pay                          | 25,98          |
| May--14 | BA030               | Banana                       | Pick n Pay                          | 13,00          |
| May--14 | F2F 0760/000        | Basil                        | Garden and grounds                  | 30,00          |
| May--14 | UM001               | Beans                        | Garden and grounds                  | 20,00          |
| May--14 | F2F 0760/000        | Beans                        | Garden and grounds                  | 60,00          |
| May--14 | F2F F760/0000       | Beans green                  | Checkers                            | 19,99          |
| May--14 | UM001               | Beans in tomato sauce canned | Makro                               | 55,95          |
| May--14 | UM001               | Beef and veg stock powder    | Makro                               | 89,95          |
| May--14 | UM001               | Beef mince                   | Makro                               | 148,52         |
| May--14 | UM001               | Beef mince                   | Pick n Pay                          | 75,52          |
| May--14 | F2F F760/0000       | Beef mince                   | Pick n Pay                          | 90,68          |
| May--14 | F2F F760/0000       | Beef stewing                 | Pick n Pay                          | 96,18          |
| May--14 | UM001               | Beetroot                     | JWC Fruit and Veg                   | 12,00          |
| May--14 | F2F 0760/000        | Beetroot                     | JWC Fruit and Veg                   | 60,00          |
| May--14 | F2F F2001           | Beetroot                     | Pick n Pay                          | 39,96          |
| May--14 | UM001               | Beetroot                     | Pick n Pay                          | 17,98          |
| May--14 | CR001               | Beetroot grated pickled      | Makro                               | 89,95          |
| May--14 | F2F 0760/000        | Beetroot                     | JWC Fruit and Veg                   | 60,00          |
| May--14 | F2F F760/0000       | Biscuits                     | Checkers                            | 20,97          |
| May--14 | Green café 0710/000 | Biscuits                     | Ticklemouse Country Fare            | 225,49         |
| May--14 | UM001               | Boerwors                     | Pick n Pay                          | 76,37          |
| May--14 | F2F F760/0000       | Brazil nuts                  | Pick n Pay                          | 37,98          |
| May--14 | PR130               | Bread                        | Fruit and veg City                  | 53,97          |
| May--14 | UM001               | Bread brown                  | Makro                               | 133,15         |
| May--14 | UM001               | Bread brown                  | Makro                               | 35,59          |
| May--14 | UM001               | Bread brown                  | Pick n Pay                          | 159,80         |
| May--14 | UM001               | Bread brown                  | Pick n Pay                          | 79,90          |
| May--14 | BA030               | Bread brown                  | Pick n Pay                          | 23,97          |
| May--14 | PR130               | Bread brown                  | Pick n Pay                          | 23,97          |
| May--14 | PR120Aftercare      | Bread white                  | Checkers                            | 16,99          |
| May--14 | F2F F760/0000       | Broccoli                     | Checkers                            | 15,99          |
| May--14 | F2F 0760/000        | Broccoli                     | JWC Fruit and Veg                   | 70,00          |
| May--14 | CR001               | Broccoli                     | Makro                               | 75,96          |
| May--14 | CR001               | Broccoli                     | Pick n Pay                          | 47,97          |
| May--14 | F2F                 | Broccoli                     | Pick n Pay                          | 63,96          |
| May--14 | PR130               | Brown bread                  | Pick n Pay                          | 23,97          |
| May--14 | UM001               | Brown bread                  | Pick n Pay                          | 79,90          |
| May--14 | CR001               | Brown rice                   | Makro                               | 67,98          |
| May--14 | LFS                 | Brown sugar                  | Pick n Pay                          | 56,99          |
| May--14 | F2F F760/0000       | Butter                       | Checkers                            | 83,97          |
| May--14 | F2F F760/0000       | Butter                       | Shoprite                            | 55,98          |
| May--14 | Green café GC000    | Butter                       | Makro                               | 61,98          |
| May--14 | F2F F2001           | Butter                       | Pick n Pay                          | 179,94         |
| May--14 | F2F F760/0000       | Butternut                    | Checkers                            | 11,05          |
| May--14 | UM001               | Butternut                    | JWC Fruit and Veg                   | 50,00          |

|          |                  |                           |                       |        |
|----------|------------------|---------------------------|-----------------------|--------|
| May---14 | CR001            | Butternut                 | Makro                 | 49,99  |
| May---14 | PR120Aftercare   | Butternut                 | Pick n Pay            | 31,25  |
| May---14 | PR120Aftercare   | Butternut                 | Pick n Pay            | 14,90  |
| May---14 | PR120Aftercare   | Butternut                 | Pick n Pay            | 26,96  |
| May---14 | CR001            | Butternut                 | Pick n Pay            | 26,00  |
| May---14 | F2F 0760/000     | Butternut                 | JWC Fruit and Veg     | 100,00 |
| May---14 | F2F 0760/000     | Cabbage                   | JWC Fruit and Veg     | 22,00  |
| May---14 | CR001            | Cabbage                   | Pick n Pay            | 51,96  |
| May---14 | F2F F760/0000    | Carrots                   | Checkers              | 20,97  |
| May---14 | UM001            | Carrots                   | Garden and grounds    | 16,00  |
| May---14 | F2F 0760/000     | Carrots                   | Garden and grounds    | 160,00 |
| May---14 | F2F 0760/000     | Carrots                   | JWC Fruit and Veg     | 46,00  |
| May---14 | CR001            | Carrots                   | Makro                 | 23,97  |
| May---14 | PR120Aftercare   | Carrots                   | Pick n Pay            | 29,97  |
| May---14 | CR001            | Carrots                   | Pick n Pay            | 39,97  |
| May---14 | PR120Aftercare   | Carrots                   | Pick n Pay            | 49,75  |
| May---14 | F2F F760/0000    | Cashew nuts               | Pick n Pay            | 21,99  |
| May---14 | UM001            | Castor sugar              | Pick n Pay            | 11,99  |
| May---14 | F2F F760/0000    | Cauliflower               | Checkers              | 47,96  |
| May---14 | F2F 0760/000     | Cauliflower               | Shoprite              | 9,99   |
| May---14 | CR001            | Cauliflower               | Makro                 | 67,96  |
| May---14 | CR001            | Cauliflower               | Pick n Pay            | 35,97  |
| May---14 | F2F              | Cauliflower               | Pick n Pay            | 63,96  |
| May---14 | PR120Aftercare   | Cauliflower               | Pick n Pay            | 71,94  |
| May---14 | PR120Aftercare   | Cauliflower and Broccoli  | Pick n Pay            | 95,94  |
| May---14 | UM001            | Cereal                    | Makro                 | 215,8  |
| May---14 | UM001            | Cereal corn flakes        | Makro                 | 139,80 |
| May---14 | UM001            | Cheddar cheese            | Makro                 | 143,00 |
| May---14 | F2F F760/0000    | Cheddar cheddar/Gouda     | Shoprite              | 172,52 |
| May---14 | PR120Aftercare   | Cheddar cheese            | Checkers              | 31,01  |
| May---14 | F2F F760/0000    | Cheddar cheese            | Checkers              | 59,99  |
| May---14 | CR001            | Cheddar cheese            | Makro                 | 143,33 |
| May---14 | Green café GC000 | Cheddar cheese            | Makro                 | 133,98 |
| May---14 | PR120Aftercare   | Cheddar cheese            | Pick n Pay            | 93,43  |
| May---14 | F2F F760/0000    | Cheddar cheese            | Pick n Pay            | 134,20 |
| May---14 | F2F F760/0000    | Cheese                    | Checkers              | 171,78 |
| May---14 | F2F F760/0000    | Cheese                    | Shoprite              | 99,98  |
| May---14 | F2F F760/0000    | Chick peas canned         | Shoprite              | 23,98  |
| May---14 | PR120Aftercare   | Chick peas canned         | Pick n Pay            | 48,96  |
| May---14 | F2F 0760/000     | Chicken                   | New Forest Meat Hyper | 599,95 |
| May---14 | F2F F760/0000    | Chicken breast fillet     | Shoprite              | 40,81  |
| May---14 | UM001            | Chicken breast fillet     | Makro                 | 168,00 |
| May---14 | Green café GC000 | Chicken breast fillet     | Makro                 | 84,00  |
| May---14 | Green café GC000 | Chicken breast fillet     | Pick n Pay            | 177,80 |
| May---14 | UM001            | Chicken livers frozen     | Makro                 | 141,90 |
| May---14 | F2F F760/0000    | Chicken with giblets      | Pick n Pay            | 109,55 |
| May---14 | F2F F760/0000    | Chickpeas canned          | Checkers              | 39,96  |
| May---14 | F2F F760/0000    | Chocolate bars            | Marie's craftshop     | 210,00 |
| May---14 | UM001            | Chutney                   | Pick n Pay            | 34,99  |
| May---14 | F2F F2001        | cinamon                   | Pick n Pay            | 7,79   |
| May---14 | CR001            | Cocoa                     | Makro                 | 34,90  |
| May---14 | F2F F2001        | Cocoa powder              | Pick n Pay            | 79,98  |
| May---14 | OH020 Overheads  | Coffee instant            | Checkers              | 191,85 |
| May---14 | PR120Aftercare   | Coffee instant            | Checkers              | 13,99  |
| May---14 | UM001            | Condensed milk            | Makro                 | 83,95  |
| May---14 | PR120Aftercare   | Cooking oil               | Checkers              | 14,99  |
| May---14 | F2F F760/0000    | Cooking oil               | Shoprite              | 35,99  |
| May---14 | F2F F760/0000    | Cooking oil               | Shoprite              | 55,98  |
| May---14 | UM001            | Cooking oil               | Makro                 | 66,95  |
| May---14 | CR001            | Cooking oil               | Makro                 | 55,90  |
| May---14 | PR120Aftercare   | Cooking oil               | Pick n Pay            | 35,99  |
| May---14 | F2F F2001        | Cooking oil               | Pick n Pay            | 64,48  |
| May---14 | Green café GC000 | Cooking oil               | Pick n Pay            | 29,99  |
| May---14 | PR120Aftercare   | Cooking oil               | Pick n Pay            | 34,99  |
| May---14 | F2F F760/0000    | Corn cob                  | Shoprite              | 14,99  |
| May---14 | F2F F760/0000    | Corn kernel can           | Checkers              | 35,96  |
| May---14 | CR001            | Corn kernel can           | Makro                 | 118,40 |
| May---14 | PR120Aftercare   | Corn kernel can           | Pick n Pay            | 39,96  |
| May---14 | CR001            | Corn kernel can           | Pick n Pay            | 29,97  |
| May---14 | UM001            | Corned meat can           | Makro                 | 143,90 |
| May---14 | F2F F760/0000    | Cream                     | Shoprite              | 32,85  |
| May---14 | UM001            | Crushed ginger and garlic | Pick n Pay            | 47,74  |
| May---14 | F2F F760/0000    | Cucumber                  | Checkers              | 31,96  |
| May---14 | F2F F760/0000    | Cucumber                  | Shoprite              | 4,99   |
| May---14 | F2F F760/0000    | Cucumber                  | Shoprite              | 14,97  |
| May---14 | CR001            | Cucumber                  | Makro                 | 26,00  |
| May---14 | F2F 0760/000     | Cucumbers                 | JWC Fruit and Veg     | 60,00  |
| May---14 | F2F F2001        | cucumbers                 | Pick n Pay            | 30,00  |
| May---14 | F2F F760/0000    | Cucumbers                 | Pick n Pay            | 50,00  |
| May---14 | CR001            | Cucumbers                 | Pick n Pay            | 10,00  |
| May---14 | F2F F2001        | Custard powder            | Pick n Pay            | 21,49  |
| May---14 | 3830/001         | Desert bowl               | Makro                 | 85,96  |
| May---14 | F2F F760/0000    | Eggs cage                 | Checkers              | 39,99  |
| May---14 | F2F F760/0000    | Eggs cage                 | Checkers              | 39,99  |
| May---14 | F2F F760/0000    | Eggs cage                 | Shoprite              | 39,99  |



|          |                     |                                 |                            |          |
|----------|---------------------|---------------------------------|----------------------------|----------|
| May---14 | F2F 0760/000        | Eggs cage                       | Shoprite                   | 22,95    |
| May---14 | UM001               | Eggs cage                       | Makro                      | 32,95    |
| May---14 | CR001               | Eggs cage                       | Makro                      | 32,95    |
| May---14 | UM001               | Eggs cage                       | Pick n Pay                 | 29,90    |
| May---14 | Green café 0710/000 | Eggs freerange                  | Home Grown free Range eggs | 53,00    |
| May---14 | F2F F2001           | Eggs freerange                  | Home Grown free Range eggs | 53,00    |
| May---14 | PR120Aftercare      | Eggs freerange                  | Pick n Pay                 | 37,99    |
| May---14 | UM001               | Eggs freerange                  | Pick n Pay                 | 75,98    |
| May---14 | PR120Aftercare      | Eggs freerange                  | Pick n Pay                 | 37,99    |
| May---14 | UM001               | Eggs freerange                  | Pick n Pay                 | 83,98    |
| May---14 | Green café 0710/000 | Espresso Coffee                 | Legado Coffee              | 1 025,01 |
| May---14 | F2F F760/0000       | Feta Cheese                     | Pick n Pay                 | 65,98    |
| May---14 | F2F F760/0000       | Fish fingers frozen             | Checkers                   | 53,98    |
| May---14 | UM001               | Flour bread white               | Makro                      | 77,95    |
| May---14 | UM001               | Flour cake                      | Makro                      | 62,95    |
| May---14 | UM001               | Frozen chicken gizzards Rainbow | Makro                      | 189,9    |
| May---14 | PR120Aftercare      | Frozen veg                      | Pick n Pay                 | 47,98    |
| May---14 | PR120Aftercare      | Frozen veg                      | Pick n Pay                 | 47,98    |
| May---14 | CR001               | Garlic                          | Pick n Pay                 | 17,22    |
| May---14 | CR001               | Gem Squash                      | Makro                      | 31,98    |
| May---14 | UM001               | Golden syrup                    | Pick n Pay                 | 20,99    |
| May---14 | UM001               | Hake fillets                    | Makro                      | 255,75   |
| May---14 | F2F F760/0000       | Hake fillets                    | Pick n Pay                 | 25,00    |
| May---14 | PR130               | Ham                             | Fruit and veg City         | 60,89    |
| May---14 | F2F F760/0000       | Highlights Bev ?? (softdrink?)  | Checkers                   | 134,97   |
| May---14 | F2F 0760/000        | Honey Eucalyptus                | Zelterbosch Farm stall     | 35,00    |
| May---14 | UM001               | Inkomazi jug 2KG ?              | Makro                      | 43,30    |
| May---14 | PR120Aftercare      | Instant coffee                  | Pick n Pay                 | 56,99    |
| May---14 | F2F F760/0000       | Instant coffee                  | Checkers                   | 46,99    |
| May---14 | UM001               | Instant coffee Ricoffy          | Makro                      | 62,95    |
| May---14 | CR001               | Instant coffee Ricoffy          | Makro                      | 62,95    |
| May---14 | GH000 Guest house   | Instant coffee Ricoffy          | Makro                      | 122,95   |
| May---14 | UM001               | Instant coffee Ricoffy          | Makro                      | 55,95    |
| May---14 | OH020 Overheads     | Instant coffee Ricoffy          | Makro                      | 62,97    |
| May---14 | Green café GC000    | Juice cans                      | Makro                      | 239,70   |
| May---14 | UM001               | Juice concentrate               | Makro                      | 116,95   |
| May---14 | CR001               | Juice concentrate               | Makro                      | 116,95   |
| May---14 | F2F 0760/000        | Juice fresh Apple               | Juice Direct Winelands     | 193,30   |
| May---14 | F2F F2001           | Juice fresh Apple/guava         | Juice Direct Winelands     | 533,90   |
| May---14 | PR120Aftercare      | Kameeldoring                    | Checkers                   | 22,99    |
| May---14 | UM001               | Lamb pack                       | Makro                      | 168,37   |
| May---14 | F2F 0760/000        | Leeks                           | Garden and grounds         | 18,00    |
| May---14 | F2F F760/0000       | Lemon juice                     | Shoprite                   | 14,95    |
| May---14 | UM001               | Lemon juice                     | Pick n Pay                 | 14,69    |
| May---14 | CR001               | Lentil dried                    | Makro                      | 78,95    |
| May---14 | F2001 F2F           | Lentils dried                   | Makro                      | 78,95    |
| May---14 | CR001               | Lettuce                         | Makro                      | 25,98    |
| May---14 | F2F 0760/000        | Lettuce                         | Zelterbosch Farm stall     | 32,85    |
| May---14 | CR001               | Lettuce heads                   | Pick n Pay                 | 21,98    |
| May---14 | F2F F760/0000       | Lindt and ferrero chocolate     | Checkers                   | 139,98   |
| May---14 | PR130               | Liver meatspread                | Pick n Pay                 | 26,97    |
| May---14 | F2F F760/0000       | M/R White ?                     | Shoprite                   | 31,98    |
| May---14 | CR001               | Maize meal                      | Makro                      | 85,95    |
| May---14 | F2F F760/0000       | Maizena                         | Checkers                   | 15,99    |
| May---14 | F2F F760/0000       | Margarine                       | Checkers                   | 21,98    |
| May---14 | F2F F760/0000       | Margarine                       | Checkers                   | 19,98    |
| May---14 | F2F F760/0000       | Margarine                       | Shoprite                   | 10,99    |
| May---14 | F2F F760/0000       | Margarine                       | Shoprite                   | 25,98    |
| May---14 | UM001               | Margarine                       | Makro                      | 71,80    |
| May---14 | CR001               | Margarine                       | Makro                      | 53,85    |
| May---14 | CR001               | Margarine                       | Pick n Pay                 | 13,98    |
| May---14 | PR130               | Margarine                       | Pick n Pay                 | 19,99    |
| May---14 | F2F F760/0000       | Mayonaise                       | Shoprite                   | 38,99    |
| May---14 | UM001               | mayonaise                       | Makro                      | 113,70   |
| May---14 | CR001               | Mayonaise                       | Makro                      | 75,80    |
| May---14 | F2F F2001           | Mayonaise                       | Pick n Pay                 | 37,99    |
| May---14 | CR001               | Mayonaise                       | Pick n Pay                 | 16,79    |
| May---14 | OH020 Overheads     | Milk                            | Checkers                   | 179,80   |
| May---14 | PR120Aftercare      | Milk                            | Checkers                   | 18,98    |
| May---14 | F2F F760/0000       | Milk                            | Checkers                   | 319,91   |
| May---14 | F2F F760/0000       | Milk                            | Checkers                   | 217,96   |
| May---14 | PR120Aftercare      | Milk                            | Pick n Pay                 | 52,99    |
| May---14 | UM001               | Milk                            | Pick n Pay                 | 55,99    |
| May---14 | F2F F760/0000       | Milk fresh                      | Shoprite                   | 14,99    |
| May---14 | F2F F760/0000       | Milk longlife                   | Shoprite                   | 54,99    |
| May---14 | UM001               | Milk longlife                   | Makro                      | 399,60   |
| May---14 | CR001               | Milk longlife                   | Makro                      | 137,85   |
| May---14 | Green café GC000    | Milk longlife                   | Makro                      | 247,70   |
| May---14 | F2001 F2F           | Milk longlife                   | Makro                      | 229,75   |
| May---14 | GH000 Guest house   | Milk longlife                   | Makro                      | 229,75   |
| May---14 | UM001               | Milk longlife                   | Makro                      | 49,95    |
| May---14 | OH020 Overheads     | Milk longlife                   | Makro                      | 91,90    |
| May---14 | Green café GC000    | Milk longlife                   | Pick n Pay                 | 64,99    |
| May---14 | PR120Aftercare      | Milk longlife                   | Pick n Pay                 | 57,99    |

|          |                     |                         |                                     |        |
|----------|---------------------|-------------------------|-------------------------------------|--------|
| May---14 | Green café 0710/000 | Mixed crisps nachos     | Mexicorn                            | 300,96 |
| May---14 | PR120Aftercare      | Mixed frozen veg McCain | Pick n Pay                          | 29,99  |
| May---14 | F2001               | Mixed lettuce           | Garden and grounds                  | 48,00  |
| May---14 | F2001               | Mixed lettuce           | Garden and grounds                  | 24,00  |
| May---14 | CR001               | Muffin flour pre---mix  | Makro                               | 89,75  |
| May---14 | CR001               | Muffin premix flour     | Pick n Pay                          | 19,98  |
| May---14 | UM001               | Mushrooms               | Makro                               | 103,92 |
| May---14 | F2001 F2F           | Mushrooms               | Makro                               | 38,97  |
| May---14 | F2F F2001           | Mushrooms               | Pick n Pay                          | 53,97  |
| May---14 | UM001               | Mutton meat pack        | Makro                               | 327,09 |
| May---14 | BA/030              | naartjie                | Makro                               | 10,00  |
| May---14 | BA030               | Nik Naks chips          | Zelterbosch Farm stall              | 3,00   |
| May---14 | CR001               | Oats no name            | Pick n Pay                          | 84,95  |
| May---14 | Creche              | Oats no name            | Pick n Pay                          | 220,87 |
| May---14 | F2001 F2F           | Oil sunflower           | Makro                               | 96,95  |
| May---14 | F2F F760/0000       | Olive oil               | Pick n Pay                          | 65,98  |
| May---14 | CR001               | Onion                   | Makro                               | 49,99  |
| May---14 | PR120Aftercare      | Onion                   | Pick n Pay                          | 49,99  |
| May---14 | PR120Aftercare      | Onion peeled            | Checkers                            | 7,49   |
| May---14 | UM001               | Onions                  | JWC Fruit and Veg                   | 49,00  |
| May---14 | UM001               | Onions                  | Pick n Pay                          | 8,50   |
| May---14 | BA/030              | Oranges                 | Makro                               | 15,99  |
| May---14 | BA030               | Oranges                 | Pick n Pay                          | 19,99  |
| May---14 | F2F F2001           | Papaya                  | Pick n Pay                          | 16,00  |
| May---14 | UM001               | Parsley                 | Makro                               | 23,50  |
| May---14 | CR001               | Parsleydried            | Makro                               | 15,00  |
| May---14 | F2F F760/0000       | Pasta                   | Checkers                            | 113,98 |
| May---14 | PR120Aftercare      | Pasta                   | Pick n Pay                          | 70,32  |
| May---14 | PR120Aftercare      | Pasta                   | Pick n Pay                          | 140,64 |
| May---14 | PR120Aftercare      | pasta                   | Pick n Pay                          | 117,44 |
| May---14 | CR001               | Pasta                   | Pick n Pay                          | 41,94  |
| May---14 | PR120Aftercare      | Pasta                   | Pick n Pay                          | 140,64 |
| May---14 | UM001               | Pasta                   | Makro                               | 155,69 |
| May---14 | CR001               | Pasta                   | Makro                               | 167,98 |
| May---14 | F2F F760/0000       | Paw paw                 | Checkers                            | 17,72  |
| May---14 | F2F 0760/000        | Paw paw                 | Shoprite                            | 13,46  |
| May---14 | UM001               | Peach slices canned     | Pick n Pay                          | 33,96  |
| May---14 | UM001               | peanut butter           | Makro                               | 102,00 |
| May---14 | CR001               | peanut butter           | Makro                               | 41,45  |
| May---14 | BA/030              | Pear                    | Makro                               | 18,99  |
| May---14 | BA030               | Pears                   | Pick n Pay                          | 59,96  |
| May---14 | BA032               | Pears                   | Pick n Pay                          | 12,99  |
| May---14 | BA030               | Pears                   | Pick n Pay                          | 14,99  |
| May---14 | PR130               | Pears                   | Pick n Pay                          | 44,97  |
| May---14 | PR130               | Pears                   | Pick n Pay                          | 37,50  |
| May---14 | PR130               | Pears                   | Pick n Pay                          | 27,49  |
| May---14 | BA030               | Pears                   | Pick n Pay                          | 27,49  |
| May---14 | UM001               | Pears                   | Timberlea Farming Trust t/a Bluejay | 70,00  |
| May---14 | PR120Aftercare      | Pears                   | Timberlea Farming Trust t/a Bluejay | 80,00  |
| May---14 | F2F F760/0000       | Peas                    | Shoprite                            | 17,98  |
| May---14 | UM001               | Peas                    | Pick n Pay                          | 55,98  |
| May---14 | CR001               | Peasfrozen              | Makro                               | 89,95  |
| May---14 | F2001 F2F           | Peasfrozen              | Makro                               | 69,95  |
| May---14 | UM001               | Pepper                  | Pick n Pay                          | 7,69   |
| May---14 | Green café GC000    | Pepper corns            | Makro                               | 168,95 |
| May---14 | PR120Aftercare      | Peppers                 | Checkers                            | 8,52   |
| May---14 | UM001               | Peppers                 | JWC Fruit and Veg                   | 26,00  |
| May---14 | CR001               | Peppers                 | Makro                               | 99,96  |
| May---14 | PR120Aftercare      | Peppers                 | Pick n Pay                          | 8,58   |
| May---14 | UM001               | Peppers                 | Pick n Pay                          | 30,81  |
| May---14 | CR001               | Peppers                 | Pick n Pay                          | 79,46  |
| May---14 | PR120Aftercare      | Peppers                 | Pick n Pay                          | 61,28  |
| May---14 | UM001               | Peppers                 | Pick n Pay                          | 32,26  |
| May---14 | UM001               | Pilchardscanned         | Makro                               | 128,95 |
| May---14 | CR001               | Pilchardscanned         | Makro                               | 128,95 |
| May---14 | PR120Aftercare      | Pilchardscanned         | Pick n Pay                          | 99,92  |
| May---14 | PR120Aftercare      | Pilchardscanned         | Pick n Pay                          | 99,92  |
| May---14 | PR120Aftercare      | Pilchardscanned         | Pick n Pay                          | 91,92  |
| May---14 | PR120Aftercare      | Pilchardscanned         | Pick n Pay                          | 53,96  |
| May---14 | F2F F760/0000       | Pineapples              | Pick n Pay                          | 15,00  |
| May---14 | F2001               | Potato                  | Garden and grounds                  | 90,00  |
| May---14 | CR001               | Potato                  | Makro                               | 64,00  |
| May---14 | PR120Aftercare      | Potato                  | Pick n Pay                          | 104,97 |
| May---14 | CR001               | Potato                  | Pick n Pay                          | 104,97 |
| May---14 | F2F 0760/000        | Potatoes                | Shoprite                            | 32,99  |
| May---14 | UM001               | Potatoes                | JWC Fruit and Veg                   | 100,00 |
| May---14 | F2F 0760/000        | Potatoes                | JWC Fruit and Veg                   | 50,00  |
| May---14 | UM001               | Pudding instant         | Pick n Pay                          | 17,96  |
| May---14 | F2F 0760/000        | RAAP                    | Garden and grounds                  | 12,00  |
| May---14 | UM001               | Raisins dried           | Pick n Pay                          | 29,99  |
| May---14 | OH020 Overheads     | Red speckled sugar bean | Pick n Pay                          | 12,99  |
| May---14 | F2F F760/0000       | Rice                    | Checkers                            | 116,97 |
| May---14 | UM001               | Rice                    | Makro                               | 123,90 |
| May---14 | PR120Aftercare      | Rice                    | Pick n Pay                          | 42,49  |

|          |                     |                               |                          |        |
|----------|---------------------|-------------------------------|--------------------------|--------|
| May---14 | PR120Aftercare      | Rice                          | Pick n Pay               | 47,49  |
| May---14 | F2F F760/0000       | Rice                          | Pick n Pay               | 78,99  |
| May---14 | PR120Aftercare      | Rice                          | Pick n Pay               | 39,99  |
| May---14 | CR001               | Rice brown                    | Pick n Pay               | 72,45  |
| May---14 | CR001               | Rice Brown                    | Pick n Pay               | 144,90 |
| May---14 | UM001               | Rob Maizena ?                 | Pick n Pay               | 17,49  |
| May---14 | UM001               | Rosemary dried                | Pick n Pay               | 14,99  |
| May---14 | PR120Aftercare      | Rusks                         | Checkers                 | 39,98  |
| May---14 | Green café 0710/000 | Rusks                         | Ticklemouse Country Fare | 587,10 |
| May---14 | PR120Aftercare      | Salami                        | Checkers                 | 56,98  |
| May---14 | F2F F760/0000       | Salt                          | Checkers                 | 17,98  |
| May---14 | UM001               | salt                          | Makro                    | 26,95  |
| May---14 | CR001               | Salt                          | Makro                    | 26,95  |
| May---14 | PR120Aftercare      | salt                          | Pick n Pay               | 8,89   |
| May---14 | Green café GC000    | Salt                          | Pick n Pay               | 17,78  |
| May---14 | F2F F760/0000       | Salt                          | Pick n Pay               | 10,98  |
| May---14 | PR120Aftercare      | Seasoning                     | Pick n Pay               | 18,49  |
| May---14 | PR120Aftercare      | Seasoning                     | Pick n Pay               | 49,38  |
| May---14 | F2001 F2F           | Seasoning garlic and herb     | Makro                    | 33,50  |
| May---14 | F2F F760/0000       | Soupp powder                  | Shoprite                 | 15,98  |
| May---14 | UM001               | Soupp powder                  | Makro                    | 28,95  |
| May---14 | F2001 F2F           | Soupp powder                  | Makro                    | 63,95  |
| May---14 | F2F F760/0000       | Spice                         | Checkers                 | 37,98  |
| May---14 | PR120Aftercare      | Spice                         | Pick n Pay               | 43,98  |
| May---14 | PR120Aftercare      | Spice                         | Pick n Pay               | 88,05  |
| May---14 | F2F F760/0000       | Spices                        | Checkers                 | 77,89  |
| May---14 | UM001               | spices                        | Makro                    | 163,95 |
| May---14 | CR001               | Spices                        | Pick n Pay               | 40,98  |
| May---14 | CR001               | spices and curry powder371.65 | Makro                    | 92,95  |
| May---14 | F2F F760/0000       | Spices/ seasoning             | Pick n Pay               | 103,92 |
| May---14 | F2001               | Spinach                       | Garden and grounds       | 70,00  |
| May---14 | CR001               | Split peas                    | Makro                    | 69,95  |
| May---14 | F2F 0760/000        | Spring onions                 | Garden and grounds       | 18,00  |
| May---14 | F2F F760/0000       | Stock liquid                  | Checkers                 | 19,98  |
| May---14 | F2F F760/0000       | Stock powder                  | Shoprite                 | 41,94  |
| May---14 | F2F F760/0000       | Stock powder                  | Pick n Pay               | 53,76  |
| May---14 | F2F F760/0000       | Sugar                         | Shoprite                 | 59,98  |
| May---14 | F2F F760/0000       | Sugar                         | Shoprite                 | 109,97 |
| May---14 | UM001               | Sugar                         | Makro                    | 189,90 |
| May---14 | UM001               | Sugar beans                   | Makro                    | 103,95 |
| May---14 | CR001               | Sugar beans                   | Makro                    | 103,95 |
| May---14 | OH020 Overheads     | Sugar brown                   | Checkers                 | 59,98  |
| May---14 | Green café GC000    | Sugar brown                   | Makro                    | 49,75  |
| May---14 | Green café GC000    | Sugar brown                   | Pick n Pay               | 33,99  |
| May---14 | Green café GC000    | Sugar brown                   | Pick n Pay               | 65,97  |
| May---14 | PR120Aftercare      | Sugar brown                   | Pick n Pay               | 23,98  |
| May---14 | UM001               | Sugar brown tubes             | Makro                    | 29,58  |
| May---14 | UM001               | Sugar replacement             | Makro                    | 148,99 |
| May---14 | PR120Aftercare      | Sugar white                   | Checkers                 | 7,99   |
| May---14 | F2F F760/0000       | Sugar white                   | Checkers                 | 48,99  |
| May---14 | F2F 0760/000        | Sugar white                   | Shoprite                 | 21,95  |
| May---14 | CR001               | Sugar white                   | Makro                    | 105,90 |
| May---14 | F2001 F2F           | Sugar white                   | Makro                    | 51,99  |
| May---14 | F2F F2001           | Sugar white                   | Pick n Pay               | 21,49  |
| May---14 | F2001               | Sweet potatoes                | Garden and grounds       | 150,00 |
| May---14 | UM001               | Tea rooibos                   | Makro                    | 32,45  |
| May---14 | CR001               | Tea rooibos                   | Makro                    | 32,45  |
| May---14 | CR001               | Teabags                       | Makro                    | 42,45  |
| May---14 | GH000 Guest house   | Teabags                       | Makro                    | 80,40  |
| May---14 | UM001               | Tennis biscuits               | Pick n Pay               | 37,96  |
| May---14 | F2F F760/0000       | Tomato paste                  | Checkers                 | 19,96  |
| May---14 | Green café GC000    | tomato sauce                  | Makro                    | 35,00  |
| May---14 | PR120Aftercare      | Tomatoes                      | Checkers                 | 13,12  |
| May---14 | F2F F760/0000       | Tomatoes                      | Shoprite                 | 14,99  |
| May---14 | F2F 0760/000        | Tomatoes                      | Fruit and veg City       | 99,09  |
| May---14 | F2001               | Tomatoes                      | Garden and grounds       | 12,00  |
| May---14 | UM001               | Tomatoes                      | JWC Fruit and Veg        | 50,00  |
| May---14 | F2F 0760/000        | Tomatoes                      | JWC Fruit and Veg        | 10,00  |
| May---14 | CR001               | Tomatoes                      | Makro                    | 32,00  |
| May---14 | UM001               | tomatoes                      | Pick n Pay               | 8,95   |
| May---14 | F2F F760/0000       | tomatoes                      | Pick n Pay               | 36,48  |
| May---14 | CR001               | Tomatoes                      | Pick n Pay               | 43,47  |
| May---14 | F2F                 | Tomatoes                      | Pick n Pay               | 33,00  |
| May---14 | PR120Aftercare      | Tomatoes                      | Pick n Pay               | 14,29  |
| May---14 | F2F 0760/000        | Tomatoes                      | Zelterbosch Farm stall   | 16,49  |
| May---14 | UM001               | tomatoes and onion mix can    | Makro                    | 93,90  |
| May---14 | F2F F760/0000       | Tuna canned                   | Checkers                 | 21,98  |
| May---14 | F2F F760/0000       | Tuna canned                   | Shoprite                 | 39,96  |
| May---14 | F2F F760/0000       | Tuna canned                   | Shoprite                 | 56,75  |
| May---14 | Green café GC000    | Tuna canned                   | Pick n Pay               | 139,90 |
| May---14 | F2F F760/0000       | Vanilla essence               | Checkers                 | 28,99  |
| May---14 | CR001               | Vanilla essence               | Makro                    | 31,95  |
| May---14 | CR001               | Vanilla essence               | Pick n Pay               | 12,79  |
| May---14 | UM001               | Wheat crusks                  | Pick n Pay               | 127,96 |

|         |               |                              |            |        |
|---------|---------------|------------------------------|------------|--------|
| May--14 | F2FF2001      | White pepper                 | Pick n Pay | 58,97  |
| May--14 | F2F F760/0000 | Whole chicken                | Pick n Pay | 69,48  |
| May--14 | UM001         | Whole chicken Frozen Rainbow | Makro      | 226,12 |
| May--14 | UM001         | Worcester sauce              | Makro      | 56,85  |
| May--14 | F2F F760/0000 | Yeast                        | Checkers   | 10,47  |
| May--14 | F2F F760/0000 | Yoghurt                      | Shoprite   | 7,99   |
| May--14 | F2FF2001      | Yoghurt                      | Pick n Pay | 50,97  |

### FOOD PURCHASING AT THE SUSTAINABILITY INSTITUTE - - - MARCH 2014

| WHEN?   | WHO?             | WHAT?                 | WHERE?                      | HOW MUCH?(ZAR) |
|---------|------------------|-----------------------|-----------------------------|----------------|
| Mar--14 | F2001            | Apples                | JW Fruit and Veg            | 140,00         |
| Mar--14 | PR130            | Anchovies             | Makro                       | 102,95         |
| Mar--14 | F2F              | Apples                | Checkers                    | 65,97          |
| Mar--14 | BA030            | Apples                | Green Road                  | 171,00         |
| Mar--14 | F2001            | apples                | Pick n Pay                  | 61,97          |
| Mar--14 | BA030            | Apples                | Pick n Pay                  | 91,96          |
| Mar--14 | CR001            | Apples                | Timberlea Farming Trust     | 110,00         |
| Mar--14 | PR120Aftercare   | Apples                | Timberlea Farming Trust     | 330,00         |
| Mar--14 | PR130            | Apricot Jam           | Makro                       | 101,95         |
| Mar--14 | F2F              | Apricot Jam           | Makro                       | 101,95         |
| Mar--14 | GC001            | Avocado               | Checkers                    | 9,98           |
| Mar--14 | GC000            | Avocado               | Pick n Pay                  | 149,99         |
| Mar--14 | F2001            | Baby marrows          | Green Road                  | 135,00         |
| Mar--14 | PR120Aftercare   | Baby marrows          | JWC Fruit and Veg           | 30,00          |
| Mar--14 | F2001            | Baby marrows          | JWC Fruit and Veg           | 40,00          |
| Mar--14 | F2001            | Baby marrows          | JWC Fruit and Veg           | 45,00          |
| Mar--14 | GC000            | Baking powder         | Makro                       | 65,90          |
| Mar--14 | F2F              | Bananas               | Checkers                    | 19,99          |
| Mar--14 | GC000            | Bananas               | Green Road                  | 33,60          |
| Mar--14 | BA030            | Bananas               | Green Road                  | 133,00         |
| Mar--14 | F2F              | Bananas               | Makro                       | 17,00          |
| Mar--14 | BA031            | Bananas               | Pick n Pay                  | 71,96          |
| Mar--14 | F2001            | Bananas               | Shoprite                    | 8,89           |
| Mar--14 | F2F farm to fork | Barley                | Pick n pay                  | 76,72          |
| Mar--14 | GC000            | Basil                 | Gardens and grounds         | 4,00           |
| Mar--14 | F2001            | Beans                 | Gardens and grounds         | 180,00         |
| Mar--14 | F2001            | Beans                 | Shoprite Checkers           | 4,99           |
| Mar--14 | OH020 Overheads  | Beans in tomato Sauce | Woolworths                  | 23,85          |
| Mar--14 | F2001            | Beef                  | JW Fruit and Veg            | 60,00          |
| Mar--14 | F2001            | Beef cuts             | New Forest Meat Hyper       | 199,31         |
| Mar--14 | F2001            | Beef mince            | New Forest Meat Hyper       | 85,76          |
| Mar--14 | F2F farm to fork | Beef mince            | Woolworths                  | 885,00         |
| Mar--14 | F2F farm to fork | Beef stew meat        | Woolworths                  | 228,86         |
| Mar--14 | F2F              | Beef stewing          | Makro                       | 186,13         |
| Mar--14 | F2001            | Beer                  | Zetlerbosch Wine Stall      | 204,00         |
| Mar--14 | F2001            | Beetroot              | JWC Fruit and Veg           | 36,00          |
| Mar--14 | GC000            | Beetroot              | JWC Fruit and Veg           | 42,00          |
| Mar--14 | PR120Aftercare   | Beetroot              | Kwikspar                    | 39,96          |
| Mar--14 | F2001            | Beetroots             | Green Road                  | 64,80          |
| Mar--14 | GC000            | Biltong               | Rootstock Vegi Crisps       | 294,00         |
| Mar--14 | GC000            | Biltong Crisps        | Rootstock Vegi Crisps       | 251,37         |
| Mar--14 | GC00 Greencafé   | Biltong Crisps        | Rootstock Vegi Crisps       | 335,26         |
| Mar--14 | GC000            | Biscuits              | Papas Confectionary         | 840,00         |
| Mar--14 | GC000            | Biscuits              | Ticklemouse Country Fare    | 196,08         |
| Mar--14 | F2F              | Black pepper spice    | Makro                       | 163,95         |
| Mar--14 | F2001            | Blomkool              | JWC Fruit and Veg           | 40,00          |
| Mar--14 | OH020 Overheads  | Boerwors              | Stellenbosch Waldorf School | 96,86          |
| Mar--14 | GC000            | Bottled tomatoes      | Nowo Organics               | 450,00         |
| Mar--14 | F2001            | Bread                 | Zetlerbosch Farm stall      | 15,10          |
| Mar--14 | F2001            | Bread                 | Zetlerbosch Farm Stall      | 42,50          |
| Mar--14 | CR001            | Breast Fillet         | Woolworths                  | 417,60         |
| Mar--14 | F2001            | Brinjals              | Green Road                  | 81,00          |
| Mar--14 | F2001            | Brinjals              | JW Fruit and Veg            | 40,00          |
| Mar--14 | F2001            | Brinjals              | JW Fruit and Veg            | 40,00          |
| Mar--14 | F2001            | Broccoli              | Green Road                  | 135,00         |
| Mar--14 | F2001            | Broccoli              | JWC Fruit and Veg           | 40,00          |
| Mar--14 | F2001            | Broccoli              | JWC Fruit and Veg           | 60,00          |
| Mar--14 | F2001            | Broccoli              | JWC Fruit and Veg           | 60,00          |
| Mar--14 | PR120Aftercare   | Broccoli              | Kwikspar                    | 113,94         |
| Mar--14 | Creche           | Brown sugar           | Makro                       | 127,80         |
| Mar--14 | GC000            | Brunfels              | Gardens and grounds         | 7,00           |
| Mar--14 | F2001            | Brunfels              | Gardens and grounds         | 20,00          |
| Mar--14 | F2001            | Brunfels              | Gardens and grounds         | 36,00          |
| Mar--14 | PR120Aftercare   | Brunfels              | Gardens and grounds         | 40,00          |
| Mar--14 | F2001            | Brunfels              | Gardens and grounds         | 90,00          |
| Mar--14 | PR120Aftercare   | Brunfels              | Gardens and grounds         | 120,00         |
| Mar--14 | PR130            | Butro Butter          | Makro                       | 37,95          |
| Mar--14 | F2F              | Butter                | Checkers                    | 239,92         |
| Mar--14 | PR130            | Butter                | Makro                       | 120,00         |
| Mar--14 | GC000            | Butter                | Pick n Pay                  | 39,99          |
| Mar--14 | F2F farm to fork | Butter                | Pick n pay                  | 135,00         |
| Mar--14 | F2001            | Butter                | Shoprite                    | 29,99          |

|          |                   |                        |                             |          |
|----------|-------------------|------------------------|-----------------------------|----------|
| Mar---14 | F2001             | butter                 | Shoprite Checkers           | 27,99    |
| Mar---14 | F2001             | Butternut              | Gardens and grounds         | 12,00    |
| Mar---14 | F2001             | Butternut              | Green Road                  | 50,00    |
| Mar---14 | F2001             | Butternut              | Green Road                  | 75,00    |
| Mar---14 | F2001             | Butternut              | JW Fruit and Veg            | 50,00    |
| Mar---14 | F2001             | Butternut              | JWC Fruit and Veg           | 50,00    |
| Mar---14 | F2001             | Butternut              | Zetlerbosch Farm Stall      | 27,65    |
| Mar---14 | F2F               | Cabbage                | Checkers                    | 25,98    |
| Mar---14 | F2001             | Cabbage                | JWC Fruit and Veg           | 22,00    |
| Mar---14 | PR120Aftercare    | Cabbage                | Kwikspar                    | 97,44    |
| Mar---14 | OH020 Overheads   | Cakes                  | Pick n Pay                  | 118,97   |
| Mar---14 | F2001             | Carrot                 | JW Fruit and Veg            | 60,00    |
| Mar---14 | F2001             | Carrot                 | JW Fruit and Veg            | 84,00    |
| Mar---14 | CR001             | Carrots                | Gardens and grounds         | 21,00    |
| Mar---14 | F2001             | Carrots                | Gardens and grounds         | 40,00    |
| Mar---14 | F2001             | Carrots                | Gardens and grounds         | 42,00    |
| Mar---14 | PR120Aftercare    | Carrots                | JWC Fruit and Veg           | 36,00    |
| Mar---14 | GC000             | Carrots                | JWC Fruit and Veg           | 60,00    |
| Mar---14 | F2001             | Carrots                | Zetlerbosch Wine Stall      | 6,00     |
| Mar---14 | F2F               | Cashew salted          | Makro                       | 99,98    |
| Mar---14 | F2001             | Cauliflower            | JWC Fruit and Veg           | 66,00    |
| Mar---14 | F2001             | Cauliflower            | JWC Fruit and Veg           | 88,00    |
| Mar---14 | PR120Aftercare    | Cauliflower            | Kwikspar                    | 79,95    |
| Mar---14 | F2001             | Cauliflower            | Mini---Mark                 | 125,70   |
| Mar---14 | F2F               | Cereal Weet---bix      | Makro                       | 100,00   |
| Mar---14 | F2001             | Cheddar                | Pick n Pay                  | 172,00   |
| Mar---14 | PR120Aftercare    | Cheddar chsse          | Kwikspar                    | 300,44   |
| Mar---14 | F2F farm to fork  | Cheddar                | Pick n pay                  | 124,02   |
| Mar---14 | GC000             | Cheddar cheese         | Pick n Pay                  | 172,00   |
| Mar---14 | GC002             | Cheese                 | Checkers                    | 84,99    |
| Mar---14 | F2F               | Cheese                 | Checkers                    | 180,49   |
| Mar---14 | Creche            | Cheese                 | Makro                       | 166,57   |
| Mar---14 | Youth             | Cheese                 | Makro                       | 179,77   |
| Mar---14 | GC000             | Cheese                 | Makro                       | 304,40   |
| Mar---14 | F2001             | Cheese                 | Shoprite                    | 115,98   |
| Mar---14 | OH020 Overheads   | Cheese                 | Stellenbosch Waldorf School | 56,80    |
| Mar---14 | F2F               | Cheese cheddar         | Makro                       | 298,14   |
| Mar---14 | GC000             | Chicken breast fillet  | Checkers                    | 232,74   |
| Mar---14 | PR130             | Chicken breast fillet  | Makro                       | 139,23   |
| Mar---14 | GC000             | Chicken breast fillet  | Pick n Pay                  | 72,03    |
| Mar---14 | F2F farm to fork  | Chicken thighs         | Woolworths                  | 69,68    |
| Mar---14 | CR001             | Chicken thighs         | Woolworths                  | 191,49   |
| Mar---14 | F2F farm to fork  | Chicken whole          | Woolworths                  | 620,87   |
| Mar---14 | F2001             | Chickpeas canned       | Pick n Pay                  | 65,94    |
| Mar---14 | Creche            | Chutney                | Makro                       | 95,95    |
| Mar---14 | F2F               | Cocoa powder           | Makro                       | 37,95    |
| Mar---14 | GC000             | Coffee espresso        | Legado                      | 720,03   |
| Mar---14 | GH000 guest house | Coffee espresso        | Legado                      | 950,02   |
| Mar---14 | GH000 guest house | Coffee espresso        | Legado                      | 1 470,04 |
| Mar---14 | OH020 Overheads   | Coffee instant Ricoffy | Game                        | 65,50    |
| Mar---14 | OH020 Overheads   | Coffee instant Ricoffy | Pick n pay                  | 125,98   |
| Mar---14 | F2F               | Condensed milk         | Makro                       | 89,25    |
| Mar---14 | PR120Aftercare    | Cooking oil            | Kwikspar                    | 73,98    |
| Mar---14 | Youth             | Cooking oil            | Makro                       | 57,80    |
| Mar---14 | Creche            | Cooking oil            | Makro                       | 57,80    |
| Mar---14 | PR130             | Cooking oil            | Makro                       | 173,40   |
| Mar---14 | F2F               | Cooking oil            | Makro                       | 187,95   |
| Mar---14 | GC000             | Cooking oil            | Pick n Pay                  | 37,99    |
| Mar---14 | F2001             | Cooking oil            | Pick n Pay                  | 37,99    |
| Mar---14 | F2001             | Cooking oil            | Shoprite Checkers           | 89,85    |
| Mar---14 | PR120Aftercare    | Corn cob               | Pick n Pay                  | 25,99    |
| Mar---14 | F2F               | Corn flour maizena     | Makro                       | 14,95    |
| Mar---14 | F2001             | Corn kernals canned    | Shoprite                    | 17,98    |
| Mar---14 | F2F               | Cream                  | Checkers                    | 9,99     |
| Mar---14 | F2F               | Cream cheese           | Checkers                    | 53,98    |
| Mar---14 | F2F farm to fork  | Cream cheese           | Pick n pay                  | 168,00   |
| Mar---14 | GC000             | Crisps                 | Rootstock Vegi Crisps       | 241,22   |
| Mar---14 | F2F               | Cucumber               | Checkers                    | 79,90    |
| Mar---14 | F2001             | Cucumbers              | Checkers                    | 79,90    |
| Mar---14 | F2001             | Cucumbers              | Pick n Pay                  | 26,60    |
| Mar---14 | F2001             | Cucumbers              | Shoprite Checkers           | 23,96    |
| Mar---14 | GC000             | Custard powder         | Makro                       | 103,95   |
| Mar---14 | PR120Aftercare    | Eggs cage              | Kwikspar                    | 47,98    |
| Mar---14 | F2001             | Eggs cage              | New Forest Meat Hyper       | 59,98    |
| Mar---14 | F2001             | Eggs cage              | Shoprite Checkers           | 69,98    |
| Mar---14 | GC000             | Eggs free range        | Homegrown Free range Eggs   | 58,00    |
| Mar---14 | PR120Aftercare    | Eggs free range        | Homegrown Free Range Eggs   | 58,00    |
| Mar---14 | PR120Aftercare    | Eggs free range        | Homegrown Free Range Eggs   | 58,00    |
| Mar---14 | F2001             | Eggs free range        | Homegrown Free Range eggs   | 116,00   |
| Mar---14 | F2001             | Eggs free range        | Homegrown Free Range eggs   | 232,00   |
| Mar---14 | GC000             | Eggs free range        | Homegrown Free Range eggs   | 232,00   |
| Mar---14 | GC000             | Elderflower Cordials   | Nowo Organics               | 140,00   |
| Mar---14 | GC000             | Espresso Coffee        | Legado                      | 359,99   |
| Mar---14 | GC00 Green café   | Espresso Coffee        | Legado                      | 454,99   |
| Mar---14 | GC000             | Espresso Coffee        | Legado                      | 1 079,97 |

|          |                   |                         |                        |          |
|----------|-------------------|-------------------------|------------------------|----------|
| Mar---14 | Youth             | Feta                    | Makro                  | 60,00    |
| Mar---14 | F2F farm to fork  | Feta cheese             | Pick n pay             | 144,00   |
| Mar---14 | F2001             | Flour                   | Eureka Meulens         | 137,23   |
| Mar---14 | Youth             | Flour                   | Makro                  | 20,95    |
| Mar---14 | Creche            | Flour cake              | Makro                  | 67,95    |
| Mar---14 | PR130             | Fresh cream             | Makro                  | 53,80    |
| Mar---14 | F2001             | Fresh cream             | Pick n Pay             | 24,00    |
| Mar---14 | F2F farm to fork  | Fresh cream             | Pick n pay             | 27,58    |
| Mar---14 | F2001             | Fresh cream             | Shoprite               | 35,97    |
| Mar---14 | F2F               | Garlic                  | Checkers               | 50,75    |
| Mar---14 | Youth             | Garliccrushed           | Makro                  | 32,00    |
| Mar---14 | F2F               | Garliccrushed           | Makro                  | 32,00    |
| Mar---14 | PR120Aftercare    | Garlicpaste             | Kwikspar               | 16,99    |
| Mar---14 | F2F               | Grapes                  | Checkers               | 42,98    |
| Mar---14 | F2001             | Grapes                  | Green Road             | 67,83    |
| Mar---14 | GC000             | Grapes                  | Green Road             | 72,00    |
| Mar---14 | BA030             | Grapes                  | Green Road             | 391,32   |
| Mar---14 | PR120Aftercare    | Green beans             | JWC Fruit and Veg      | 30,00    |
| Mar---14 | PR120Aftercare    | Green beans             | Pick n Pay             | 14,43    |
| Mar---14 | F2001             | Green beans organic     | EricSwartz             | 80,00    |
| Mar---14 | CR001             | Green peppers           | Gardens and grounds    | 10,00    |
| Mar---14 | F2001             | Green peppers           | Gardens and grounds    | 30,00    |
| Mar---14 | F2001             | Ground beef             | Britos Meat Centre     | 192,00   |
| Mar---14 | F2F               | Hake fillet             | Checkers               | 299,95   |
| Mar---14 | PR120Aftercare    | Herbs                   | Youth Christine        | 140,00   |
| Mar---14 | F2F               | Herbs spices            | Makro                  | 213,90   |
| Mar---14 | GC000             | Hot chocolate powder    | Makro                  | 179,80   |
| Mar---14 | F2001             | icecream                | Zetlerbosch Wine Stall | 22,00    |
| Mar---14 | F2001             | Instant Coffee          | Makro                  | 227,00   |
| Mar---14 | F2001             | Instant pudding         | Shoprite               | 25,96    |
| Mar---14 | F2001             | Jaimaica Gemmer         | Shoprite               | 17,00    |
| Mar---14 | Creche            | Jelly                   | Makro                  | 47,90    |
| Mar---14 | PR130             | Juice                   | Makro                  | 330,00   |
| Mar---14 | GC000             | Juice canned            | Makro                  | 495,00   |
| Mar---14 | Creche            | Juice concentrate       | Makro                  | 272,00   |
| Mar---14 | F2F               | Kiwi fruit              | Checkers               | 35,91    |
| Mar---14 | PR120Aftercare    | Kool                    | Gardens and grounds    | 40,00    |
| Mar---14 | F2F               | Lasagne                 | Checkers               | 323,88   |
| Mar---14 | Creche            | Lentils                 | Makro                  | 83,95    |
| Mar---14 | F2F               | lentils                 | Makro                  | 83,95    |
| Mar---14 | Youth             | Lentils                 | Makro                  | 167,90   |
| Mar---14 | F2001             | Lettuce                 | Zetlerbosch Wine Stall | 41,40    |
| Mar---14 | F2001             | Lettuce mixed           | Gardens and grounds    | 60,00    |
| Mar---14 | F2001             | Lettuce organic         | EricSwartz             | 50,00    |
| Mar---14 | Ishack            | Lunch                   | Gardens and grounds    | 150,00   |
| Mar---14 | F2001             | M/R white 250g (sugar?) | Shoprite               | 111,93   |
| Mar---14 | Creche            | Maize                   | Makro                  | 59,00    |
| Mar---14 | F2F farm to fork  | Maize                   | Pick n pay             | 18,99    |
| Mar---14 | OH020 Overheads   | Maize                   | Pick n pay             | 20,69    |
| Mar---14 | F2001             | Maize                   | Shoprite Checkers      | 19,99    |
| Mar---14 | Creche            | Margarine               | Makro                  | 69,50    |
| Mar---14 | GC000             | Margarine               | Pick n Pay             | 25,98    |
| Mar---14 | F2001             | Margarine               | Pick n Pay             | 25,98    |
| Mar---14 | PR130             | Margarine               | Pick n pay             | 36,00    |
| Mar---14 | F2001             | Margarine               | Shoprite               | 41,97    |
| Mar---14 | F2001             | Margarine               | Shoprite Checkers      | 63,96    |
| Mar---14 | F2F               | Marmite spread          | Makro                  | 32,95    |
| Mar---14 | PR130             | Marmite spread          | Makro                  | 93,00    |
| Mar---14 | PR120Aftercare    | Marrows                 | Kwikspar               | 38,97    |
| Mar---14 | GC000             | Mayonaise               | Makro                  | 76,95    |
| Mar---14 | F2F               | Mayonaise               | Makro                  | 76,95    |
| Mar---14 | Creche            | Mayonaise               | Makro                  | 77,80    |
| Mar---14 | F2001             | Mayonaise               | Shoprite               | 17,99    |
| Mar---14 | F2001             | Melons                  | Pick n Pay             | 23,99    |
| Mar---14 | PR120Aftercare    | Milk longlife           | Kwikspar               | 116,28   |
| Mar---14 | Youth             | Milk longlife           | Makro                  | 100,00   |
| Mar---14 | Creche            | Milk longlife           | Makro                  | 199,80   |
| Mar---14 | F2001             | Milk longlife           | Makro                  | 500,00   |
| Mar---14 | GC000             | Milk longlife           | Makro                  | 1 000,00 |
| Mar---14 | F2001             | Milk longlife           | Pick n Pay             | 13,98    |
| Mar---14 | OH020 Overheads   | Milk longlife           | Pick n Pay             | 60,00    |
| Mar---14 | OH020 Overheads   | Milk longlife           | Pick n pay             | 192,98   |
| Mar---14 | F2F farm to fork  | Milk longlife           | Pick n pay             | 285,00   |
| Mar---14 | GH000 guest house | Milk longlife           | Pick n pay             | 339,95   |
| Mar---14 | CR001             | Mince                   | Woolworths             | 330,00   |
| Mar---14 | GC000             | Mixed crisps            | Kwikspar               | 233,59   |
| Mar---14 | GC000             | Mixed Juice             | Juice Direct           | 205,85   |
| Mar---14 | F2001             | Mixed Juice             | Juice Direct Winelands | 220,70   |
| Mar---14 | F2001             | Mixed Juice             | Juice Direct Winelands | 540,25   |
| Mar---14 | F2001             | Mixed Juice             | Juice Direct Winelands | 841,65   |
| Mar---14 | F2F farm to fork  | Mixed nuts              | Pick n pay             | 79,96    |
| Mar---14 | F2001             | Mixed salads            | Green Road             | 220,00   |
| Mar---14 | F2F               | MM Dennywhite           | Checkers               | 107,94   |
| Mar---14 | F2F farm to fork  | Mozzarella              | Pick n pay             | 78,52    |

|          |                  |                                  |                             |        |
|----------|------------------|----------------------------------|-----------------------------|--------|
| Mar---14 | Creche           | Muffin mix                       | Makro                       | 79,00  |
| Mar---14 | F2001            | Mushrooms                        | Pick n Pay                  | 105,00 |
| Mar---14 | F2F farm to fork | Mushrooms                        | Pick n pay                  | 143,92 |
| Mar---14 | F2F              | Mustard                          | Makro                       | 64,85  |
| Mar---14 | GC000            | Nachos crisps                    | Mexicorn                    | 752,40 |
| Mar---14 | F2F              | Nesquick strawberry drink powder | Makro                       | 32,45  |
| Mar---14 | F2F farm to fork | Noodles                          | Pick n pay                  | 3,90   |
| Mar---14 | F2001            | Noodles                          | Shoprite                    | 14,79  |
| Mar---14 | GC000            | Nougat Bars                      | The Olive Grove             | 562,52 |
| Mar---14 | PR130            | Nutella nut Spread               | Makro                       | 59,90  |
| Mar---14 | Creche           | Oats                             | Makro                       | 209,50 |
| Mar---14 | F2001            | Oats                             | Pick n Pay                  | 33,98  |
| Mar---14 | F2F              | Olive oil                        | Makro                       | 38,95  |
| Mar---14 | GC000            | Onions                           | JWC Fruit and Veg           | 35,00  |
| Mar---14 | PR120 Aftercare  | Onions                           | JWC Fruit and Veg           | 35,00  |
| Mar---14 | F2001            | Onions                           | JWC Fruit and Veg           | 50,00  |
| Mar---14 | F2F farm to fork | Pamesan Cheese                   | Pick n pay                  | 65,15  |
| Mar---14 | Creche           | Pasta                            | Makro                       | 180,90 |
| Mar---14 | F2F              | Pasta                            | Makro                       | 305,97 |
| Mar---14 | Youth            | pasta                            | Makro                       | 671,80 |
| Mar---14 | F2001            | Pasta                            | Shoprite                    |        |
| Mar---14 | F2001            | Pastry Rooti                     | New Forest Meat Hyper       | 29,97  |
| Mar---14 | F2F              | Paw paw                          | Checkers                    | 41,82  |
| Mar---14 | F2F              | peach desert                     | Checkers                    | 69,94  |
| Mar---14 | Creche           | Peanut butter                    | Makro                       | 79,90  |
| Mar---14 | PR130            | Peanut butter                    | Makro                       | 110,80 |
| Mar---14 | F2001            | Peanut butter                    | Pick n Pay                  | 29,90  |
| Mar---14 | BA030            | Pears                            | Green Road                  | 60,00  |
| Mar---14 | F2001            | Peppers                          | Gardens and grounds         | 10,00  |
| Mar---14 | PR120 Aftercare  | Peppers                          | JWC Fruit and Veg           | 30,00  |
| Mar---14 | GC000            | Peppers                          | JWC Fruit and Veg           | 60,00  |
| Mar---14 | PR120 Aftercare  | Peppers                          | Kwikspar                    | 61,48  |
| Mar---14 | F2001            | peppers                          | Shoprite                    | 35,31  |
| Mar---14 | OH020 Overheads  | Peppers                          | Woolworths                  | 23,99  |
| Mar---14 | F2001            | Peppers                          | Zetlerbosch Wine Stall      | 50,00  |
| Mar---14 | GC000            | Pickled onions                   | Nowo Organics               | 150,00 |
| Mar---14 | Creche           | Pilchards in tomato sauce canned | Makro                       | 136,95 |
| Mar---14 | Youth            | Pilchards in tomato sauce canned | Makro                       | 344,90 |
| Mar---14 | BA030            | Pineapples                       | Stellenbosch waldorf school | 44,00  |
| Mar---14 | Creche           | Play Dough bucket                | Makro                       | 196,00 |
| Mar---14 | BA030            | Plums                            | Green Road                  | 158,40 |
| Mar---14 | PR130            | Popcorn                          | Makro                       | 81,95  |
| Mar---14 | F2001            | Potatoes                         | Green Road                  | 85,00  |
| Mar---14 | F2001            | Potatoes                         | JW Fruit and Veg            | 40,00  |
| Mar---14 | F2001            | Potatoes                         | JWC Fruit and Veg           | 60,00  |
| Mar---14 | F2001            | Potatoes                         | JWC Fruit and Veg           | 100,00 |
| Mar---14 | F2001            | POTatoes                         | JWC Fruit and Veg           | 120,00 |
| Mar---14 | PR120 Aftercare  | POTatoes                         | JWC Fruit and Veg           | 150,00 |
| Mar---14 | GC000            | potatoes                         | JWC Fruit and Veg           | 165,00 |
| Mar---14 | PR120 Aftercare  | Potatoes                         | Kwikspar                    | 275,94 |
| Mar---14 | PR120 Aftercare  | Potatoes                         | PA Germishuys               | 140,00 |
| Mar---14 | PR120 Aftercare  | Potatoes                         | Pick n Pay                  | 34,00  |
| Mar---14 | PR120 Aftercare  | Pumpkin                          | Pick n Pay                  | 45,34  |
| Mar---14 | F2001            | Raisins                          | Pick n Pay                  | 59,93  |
| Mar---14 | F2F              | Rice                             | Checkers                    | 59,96  |
| Mar---14 | CR001 Creche     | Rice                             | Checkers                    | 179,88 |
| Mar---14 | PR120 Aftercare  | Rice                             | Kwikspar                    | 221,96 |
| Mar---14 | F2F              | Rice                             | Makro                       | 38,95  |
| Mar---14 | Youth            | Rice                             | Makro                       | 135,00 |
| Mar---14 | F2001            | Rice                             | Pick n Pay                  | 42,99  |
| Mar---14 | F2001            | Rice                             | Shoprite Checkers           | 79,99  |
| Mar---14 | F2001            | Salad pack                       | Green Road                  | 40,00  |
| Mar---14 | PR120 Aftercare  | Salt                             | Kwikspar                    | 12,98  |
| Mar---14 | Youth            | Salt                             | Makro                       | 7,95   |
| Mar---14 | F2F              | Salt                             | Makro                       | 23,85  |
| Mar---14 | F2F farm to fork | Salt                             | Pick n pay                  | 39,16  |
| Mar---14 | Creche           | Salt                             | Makro                       | 31,80  |
| Mar---14 | F2001            | Skorsies                         | Gardens and grounds         | 10,00  |
| Mar---14 | F2001            | Skorsies                         | Gardens and grounds         | 50,00  |
| Mar---14 | F2001            | Slaai                            | Gardens and grounds         | 12,00  |
| Mar---14 | F2F              | Smith Feast                      | Checkers                    | 50,97  |
| Mar---14 | F2F farm to fork | Soy sauce                        | Pick n pay                  | 20,49  |
| Mar---14 | F2001            | Spansek                          | Shoprite                    | 39,98  |
| Mar---14 | F2001            | Spanspek (?vegetable)            | Green Road                  | 50,00  |
| Mar---14 | F2F              | Spice                            | Checkers                    | 247,56 |
| Mar---14 | F2F              | Spice curry powder               | Makro                       | 18,95  |
| Mar---14 | F2F              | Spice stock cubes                | Makro                       | 130,10 |
| Mar---14 | F2F farm to fork | Spices                           | Pick n pay                  | 102,45 |
| Mar---14 | F2001            | Spices                           | Shoprite                    | 163,92 |
| Mar---14 | F2001            | Spices                           | Shoprite Checkers           | 15,97  |
| Mar---14 | Creche           | Spices curry powder              | Makro                       | 37,90  |
| Mar---14 | F2001            | Spinach                          | Gardens and grounds         | 21,00  |
| Mar---14 | F2001            | Spinach                          | Gardens and grounds         | 78,00  |
| Mar---14 | F2001            | Spinach                          | Gardens and grounds         | 150,00 |

|          |                   |                       |                             |          |
|----------|-------------------|-----------------------|-----------------------------|----------|
| Mar---14 | F2001             | Spinach               | Green Road                  | 108,00   |
| Mar---14 | F2001             | Spinach               | JWC Fruit and Veg           | 240,00   |
| Mar---14 | GC000             | Spring onions         | Gardens and grounds         | 6,00     |
| Mar---14 | F2001             | Spring onions         | Gardens and grounds         | 18,00    |
| Mar---14 | F2F               | Steaksauce            | Makro                       | 112,70   |
| Mar---14 | F2001             | Stock powder          | Pick n Pay                  | 37,49    |
| Mar---14 | GC000             | Stockfish cutlets     | Pacific Foods Eesteriver    | 175,00   |
| Mar---14 | F2001             | Stockfish cutlets     | Pacific Foods Eesteriver    | 175,00   |
| Mar---14 | PR120 Aftercare   | Sugar                 | Kwikspar                    | 49,98    |
| Mar---14 | Creche            | Sugar beans           | Makro                       | 118,00   |
| Mar---14 | OH020 Overheads   | Sugar brown           | Game                        | 34,90    |
| Mar---14 | F2001             | Sugar brown           | Makro                       | 63,90    |
| Mar---14 | GC000             | Sugar brown           | Makro                       | 203,95   |
| Mar---14 | OH020 Overheads   | Sugar brown           | Pick n pay                  | 54,49    |
| Mar---14 | GH000 guest house | Sugar brown           | Pick n pay                  | 113,98   |
| Mar---14 | F2001             | Sugar stick packaged  | Pick n Pay                  | 31,98    |
| Mar---14 | F2F               | sugar white           | Makro                       | 159,90   |
| Mar---14 | F2F               | Sweet chilli sauce    | Checkers                    | 49,98    |
| Mar---14 | GC000             | Sweet chilli sauce    | Makro                       | 61,95    |
| Mar---14 | F2F               | Sweet melon           | Makro                       | 23,00    |
| Mar---14 | GC000             | Table salt            | Makro                       | 7,95     |
| Mar---14 | F2001             | Tea                   | Makro                       | 133,90   |
| Mar---14 | lshack            | Tea and muffin        | Gardens and grounds         | 70,00    |
| Mar---14 | Creche            | Teabags               | Makro                       | 43,9     |
| Mar---14 | GC000             | Teabags               | Makro                       | 149,85   |
| Mar---14 | Youth             | Tomat paste           | Makro                       | 68,95    |
| Mar---14 | PR120 Aftercare   | Tomato paste          | Kwikspar                    | 71,76    |
| Mar---14 | F2F               | Tomato paste          | Makro                       | 68,95    |
| Mar---14 | F2F farm to fork  | Tomato sauce          | Pick n pay                  | 27,59    |
| Mar---14 | GC000             | Tomatoes              | Gardens and grounds         | 12,00    |
| Mar---14 | CR001             | Tomatoes              | Gardens and grounds         | 24,60    |
| Mar---14 | F2001             | Tomatoes              | Gardens and grounds         | 48,00    |
| Mar---14 | F2001             | Tomatoes              | Gardens and grounds         | 120,00   |
| Mar---14 | F2001             | Tomatoes              | Gardens and grounds         | 216,00   |
| Mar---14 | F2001             | Tomatoes              | Gardens and grounds         | 224,00   |
| Mar---14 | F2001             | Tomatoes              | JW Fruit and Veg            | 26,00    |
| Mar---14 | F2001             | Tomatoes              | JWC Fruit and Veg           | 20,00    |
| Mar---14 | GC000             | Tomatoes              | Ticklemouse Country Fare    | 398,32   |
| Mar---14 | GC000             | Tuna canned           | Makro                       | 139,90   |
| Mar---14 | F2001             | Tuna in tomato canned | Shoprite                    | 39,95    |
| Mar---14 | OH020 Overheads   | Unknown               | Stellenbosch Waldorf School | 170,00   |
| Mar---14 | GC000             | Vanilla essence       | Makro                       | 36,95    |
| Mar---14 | F2001             | Vanilla essence       | Pick n Pay                  | 41,99    |
| Mar---14 | F2001             | Watermelon            | Green Road                  | 40,00    |
| Mar---14 | GC000             | Watermelon            | Green Road                  | 40,00    |
| Mar---14 | CR001             | Whole chicken         | Woolworths                  | 349,64   |
| Mar---14 | F2001             | Whole lamb            | New Forest Meat Hyper       | 467,10   |
| Mar---14 | F2001             | Whole lamb            | New Forest Meat Hyper       | 1 701,25 |
| Mar---14 | F2001             | Wine                  | Spier Wine Estate           | 276,00   |
| Mar---14 | GC000             | Yeast                 | Makro                       | 89,95    |
| Mar---14 | F2F               | Yeast                 | Makro                       | 89,96    |
| Mar---14 | F2F               | Yoghurt               | Checkers                    | 67,96    |
| Mar---14 | F2001             | Yoghurt               | Pick n Pay                  | 68,00    |
| Mar---14 | F2F farm to fork  | Yoghurt               | Pick n pay                  | 81,96    |
| Mar---14 | F2001             | Yoghurt               | Shoprite                    | 31,98    |

### FOOD PURCHASING AT THE SUSTAINABILITY INSTITUTE - - - APRIL 2014

| WHEN?    | WHO?                      | WHAT?               | WHERE?                | HOW MUCH?(ZAR) |
|----------|---------------------------|---------------------|-----------------------|----------------|
| Apr---14 | PR120                     | Apples              | Green Road            | 105,00         |
| Apr---14 | F2001                     | Apples              | Pick n Pay            | 37,50          |
| Apr---14 | F2001                     | Apples              | Pick n Pay            | 16,99          |
| Apr---14 | Young farmers --- interns | Apricot jam         | Pick n Pay            | 23,98          |
| Apr---14 | F2001                     | Apricots            | Pick n Pay            | 73,98          |
| Apr---14 | CR001                     | aromat              | Bidvest               | 80,00          |
| Apr---14 | F2F                       | Aromate             | Checkers              | 51,98          |
| Apr---14 | GC000                     | Avocados            | Pick n Pay            | 20,00          |
| Apr---14 | F2001                     | Avocados            | Superspa              | 15,96          |
| Apr---14 | PR120                     | Baby marrow         | JWC Fruit and Veg     | 60,00          |
| Apr---14 | PR120                     | Bananas             | Green Road            | 36,00          |
| Apr---14 | F2001                     | Bananas             | Pick n Pay            | 13,33          |
| Apr---14 | F2001                     | Bananas             | Superspa              | 22,42          |
| Apr---14 | PR120                     | Beans sugar         | Bidvest               | 138,90         |
| Apr---14 | F2001                     | Beans sugar         | Bidvest               | 138,90         |
| Apr---14 | PR120                     | Beetroot            | Green Road            | 154,00         |
| Apr---14 | PR120                     | Beetroot            | JWC Fruit and Veg     | 36,00          |
| Apr---14 | CR001                     | Beetroot            | JWC Fruit and Veg     | 36,00          |
| Apr---14 | GC000                     | Biltong crisps beef | Rootstock Vegi Crisps | 335,16         |
| Apr---14 | GC000                     | Biscuits            | Ticklemouse           | 298,11         |
| Apr---14 | Young farmers --- interns | Bread brown         | Pick n Pay            | 50,94          |
| Apr---14 | F2001                     | Bread white         | Superspa              | 11,49          |
| Apr---14 | PR120                     | Brinjals            | JWC Fruit and Veg     | 60,00          |
| Apr---14 | PR120                     | Broccoli            | Green Road            | 108,00         |



|          |                            |                            |                                       |          |
|----------|----------------------------|----------------------------|---------------------------------------|----------|
| Apr---14 | Creche                     | Broccoli                   | JWC Fruit and Veg                     | 60,00    |
| Apr---14 | PR120                      | Broccoli                   | JWC Fruit and Veg                     | 120,00   |
| Apr---14 | F2001                      | Broccoli                   | JWC Fruit and Veg                     | 150,00   |
| Apr---14 | PR120                      | Brussels                   | Garden and Grounds                    | 12,00    |
| Apr---14 | F2001                      | Butter                     | Bidvest                               | 331,06   |
| Apr---14 | GC000                      | butter                     | Pick n Pay                            | 81,00    |
| Apr---14 | F2001                      | Butter                     | Pick n Pay                            | 27,00    |
| Apr---14 | PR120                      | Butternut                  | Green Road                            | 85,00    |
| Apr---14 | CR001                      | Butternut                  | JWC Fruit and Veg                     | 50,00    |
| Apr---14 | F2001                      | Butternut                  | JWC Fruit and Veg                     | 50,00    |
| Apr---14 | PR120                      | Cabbages                   | JWC Fruit and Veg                     | 79,00    |
| Apr---14 | Aftercare                  | Carrots                    | Fruit and veg city Food lovers market | 26,99    |
| Apr---14 | Creche                     | Carrots                    | Garden and Grounds                    | 58,00    |
| Apr---14 | PR120                      | Carrots                    | Green Road                            | 114,70   |
| Apr---14 | Creche                     | Carrots                    | JWC Fruit and Veg                     | 50,00    |
| Apr---14 | PR120                      | Carrots                    | JWC Fruit and Veg                     | 50,00    |
| Apr---14 | CR001                      | Carrots                    | JWC Fruit and Veg                     | 24,00    |
| Apr---14 | F2001                      | Carrots                    | JWC Fruit and Veg                     | 72,00    |
| Apr---14 | F2001                      | Carrots                    | JWC Fruit and Veg                     | 50,00    |
| Apr---14 | Aftercare                  | Carrots                    | Shoprite Checkers                     | 5,99     |
| Apr---14 | Creche                     | Cauliflower                | JWC Fruit and Veg                     | 60,00    |
| Apr---14 | F2001                      | Cauliflower                | JWC Fruit and Veg                     | 90,00    |
| Apr---14 | CR001                      | Cheese                     | Bidvest                               | 110,00   |
| Apr---14 | F2001                      | Cheese                     | Bidvest                               | 207,26   |
| Apr---14 | PR120                      | Cheese Cheddar             | Bidvest                               | 141,84   |
| Apr---14 | GC000                      | Cheese cheddar             | Superspa                              | 69,99    |
| Apr---14 | PR120                      | Cheese feta                | Bidvest                               | 114,52   |
| Apr---14 | F2001                      | Cheese feta                | Pick n Pay                            | 35,00    |
| Apr---14 | GC000                      | Cheese gouda               | Pick n Pay                            | 80,00    |
| Apr---14 | F2001                      | Chick peas canned          | Bidvest                               | 189,88   |
| Apr---14 | F2001                      | Chicken (M/Valley)         | Superspa                              | 347,69   |
| Apr---14 | GC000                      | Chicken (M/Valley)         | Superspa                              | 55,42    |
| Apr---14 | CR001                      | Chicken (whole and fillet) | Bidvest                               | 1 775,00 |
| Apr---14 | GC000                      | Chicken breast fillet      | Pick n Pay                            | 112,27   |
| Apr---14 | AG01 Agriseta learnerships | Chicken mayo sandwich      | National Pride Trading                | 23,00    |
| Apr---14 | F2001                      | Chicken nuggets            | Pacific Dried Fruit                   | 50,00    |
| Apr---14 | F2001                      | Chicken wings              | Pick n Pay                            | 78,41    |
| Apr---14 | F2001                      | Chicken, coleslaw          | KFC                                   | 39,70    |
| Apr---14 | CR001                      | Chutney                    | Bidvest                               | 100,00   |
| Apr---14 | PR120                      | Cooking oil                | Bidvest                               | 358,10   |
| Apr---14 | F2001                      | Cooking oil                | Bidvest                               | 358,10   |
| Apr---14 | CR001                      | Cooking oil                | Bidvest                               | 95,00    |
| Apr---14 | GC000                      | Cooking oil spray          | Pick n Pay                            | 31,99    |
| Apr---14 | F2001                      | Coriander                  | Pick n Pay                            | 17,98    |
| Apr---14 | F2001                      | Crunch museli              | Superspa                              | 51,98    |
| Apr---14 | CR001                      | Cucumber                   | JWC Fruit and Veg                     | 28,00    |
| Apr---14 | F2001                      | Cucumber                   | Superspa                              | 52,94    |
| Apr---14 | Creche                     | Cucumbers                  | JWC Fruit and Veg                     | 20,00    |
| Apr---14 | F2001                      | Cucumbers                  | Pick n Pay                            | 48,00    |
| Apr---14 | CR001                      | Curry                      | Bidvest                               | 129,00   |
| Apr---14 | F2001                      | Driedfruit                 | Pacific Dried Fruit                   | 40,00    |
| Apr---14 | PR120                      | Easter eggs                | Checkers                              | 1 375,00 |
| Apr---14 | F2001                      | Eggs                       | New Forest Meat Hyper                 | 30,00    |
| Apr---14 | Creche                     | Eggs free range            | Homegrown Free Range Eggs             | 58,00    |
| Apr---14 | PR120                      | Eggs free range            | Homegrown Free Range Eggs             | 58,00    |
| Apr---14 | GC000                      | Eggs free range            | Homegrown Free Range eggs             | 116,00   |
| Apr---14 | F2001                      | Eggs free range            | Homegrown Free Range eggs             | 116,00   |
| Apr---14 | GC000                      | Eggs free range            | Homegrown Free Range eggs             | 58,00    |
| Apr---14 | F2001                      | Eggs free range            | Homegrown Free Range eggs             | 116,00   |
| Apr---14 | GH000                      | Espresso coffee            | Legado                                | 380,01   |
| Apr---14 | GC000                      | Espresso coffee            | Legado                                | 520,02   |
| Apr---14 | GC000                      | Espresso coffee            | Legado                                | 540,02   |
| Apr---14 | F2001                      | F/L Red econo pack ?       | Superspa                              | 19,99    |
| Apr---14 | F2001                      | Flour (bread)              | Bidvest                               | 288,09   |
| Apr---14 | F2001                      | Flour (cake)               | Bidvest                               | 363,48   |
| Apr---14 | F2001                      | Fresh cream                | Pick n Pay                            | 71,67    |
| Apr---14 | GC000                      | Fruit dante                | Pacific Foods                         | 56,00    |
| Apr---14 | PR120                      | Garlic                     | National Pride Trading                | 24,00    |
| Apr---14 | SW020 Garden and grounds   | Garlic                     | Pick n Pay                            | 60,15    |
| Apr---14 | SW020 Garden and grounds   | Ginger                     | Pick n Pay                            | 35,86    |
| Apr---14 | F2001                      | Grape Juice                | National Pridetrading                 | 21,80    |
| Apr---14 | F2001                      | Grapefruit                 | Pick n Pay                            | 6,90     |
| Apr---14 | PR120                      | Green beans                | JWC Fruit and Veg                     | 60,00    |
| Apr---14 | CR001                      | Green beans                | JWC Fruit and Veg                     | 60,00    |
| Apr---14 | F2001                      | Hake fish steaks           | Pacific Dried Fruit                   | 120,00   |
| Apr---14 | F2001                      | Halfmoons 50's             | Pacific Dried Fruit                   | 100,00   |
| Apr---14 | Overheads                  | Instant coffee             | Bidvest                               | 255,36   |
| Apr---14 | F2001                      | Instant coffee             | Bidvest                               | 127,68   |
| Apr---14 | CR001                      | Instant coffee             | Bidvest                               | 127,00   |
| Apr---14 | F2001                      | Juice                      | Pick n Pay                            | 28,00    |
| Apr---14 | F2F                        | Juice                      | Makro                                 | 1 184,00 |
| Apr---14 | F2001                      | Kiwi fruit                 | Pick n Pay                            | 20,00    |
| Apr---14 | F2001                      | Lemons                     | Pick n Pay                            | 19,23    |
| Apr---14 | PR120                      | Lentils brown              | Bidvest                               | 181,20   |
| Apr---14 | F2001                      | Lentils brown              | Bidvest                               | 181,20   |

|          |                           |                                 |                                       |        |
|----------|---------------------------|---------------------------------|---------------------------------------|--------|
| Apr---14 | PR120                     | Lettuce                         | Garden and Grounds                    | 6,00   |
| Apr---14 | F2001                     | Lettuce                         | Superspa                              | 35,98  |
| Apr---14 | PR120                     | Maize                           | National Pride Trading                | 26,22  |
| Apr---14 | CR001                     | Maize meal                      | Bidvest                               | 78,00  |
| Apr---14 | PR120                     | Mango                           | Green Road                            | 40,00  |
| Apr---14 | F2001                     | Margarine                       | Pick n Pay                            | 12,99  |
| Apr---14 | Young farmers --- interns | Margarine                       | Pick n Pay                            | 21,58  |
| Apr---14 | PR130                     | marshmallow eggs                | Fruit and veg city Food lovers market | 100,00 |
| Apr---14 | GH000                     | Mayonaise                       | Shoprite Checkers                     | 39,99  |
| Apr---14 | F2001                     | Mealie meal                     | Bidvest                               | 27,16  |
| Apr---14 | PR120                     | Mealie samp                     | Bidvest                               | 34,48  |
| Apr---14 | F2001                     | Mealie samp and beans           | Bidvest                               | 56,40  |
| Apr---14 | Young farmers --- interns | Milk fresh                      | Pick n Pay                            | 15,98  |
| Apr---14 | Overheads                 | Milk longlife                   | Bidvest                               | 197,10 |
| Apr---14 | PR120                     | Milk longlife                   | Bidvest                               | 394,20 |
| Apr---14 | F2001                     | Milk longlife                   | Bidvest                               | 394,20 |
| Apr---14 | CR001                     | Milk longlife                   | Bidvest                               | 296,40 |
| Apr---14 | F2001                     | Mince pies                      | Pacific Dried Fruit                   | 35,00  |
| Apr---14 | F2001                     | Misc?                           | New Forest Meat Hyper                 | 166,87 |
| Apr---14 | F2001                     | Mixed Juice                     | Juice Direct                          | 215,55 |
| Apr---14 | F2001                     | Mixed Juice                     | JWC Fruit and Veg                     | 215,55 |
| Apr---14 | F2001                     | Mushrooms                       | Superspa                              | 19,98  |
| Apr---14 | F2001                     | Mustard seeds                   | Bidvest                               | 147,06 |
| Apr---14 | F2001                     | Mustard seeds                   | Pick n Pay                            | 18,58  |
| Apr---14 | F2001                     | Oats                            | Bidvest                               | 84,20  |
| Apr---14 | CR001                     | Oats                            | Bidvest                               | 141,00 |
| Apr---14 | F2001                     | Oats                            | Superspa                              | 24,99  |
| Apr---14 | PR120                     | Onions                          | Green Road                            | 108,00 |
| Apr---14 | CR001                     | Onions                          | JWC Fruit and Veg                     | 30,00  |
| Apr---14 | F2001                     | Onions                          | JWC Fruit and Veg                     | 50,00  |
| Apr---14 | F2001                     | Oranges                         | Pick n Pay                            | 25,00  |
| Apr---14 | PR120                     | Pasta                           | Bidvest                               | 844,06 |
| Apr---14 | CR001                     | Pasta                           | Bidvest                               | 234,00 |
| Apr---14 | Young farmers --- interns | Peanut butter                   | Pick n Pay                            | 41,98  |
| Apr---14 | GC000                     | Peanuts and Raisin mix          | Pacific Foods                         | 50,00  |
| Apr---14 | F2001                     | Pears                           | Pick n Pay                            | 21,99  |
| Apr---14 | PR120                     | Peas splitgreen                 | Bidvest                               | 119,80 |
| Apr---14 | F2001                     | Peas splitgreen                 | Bidvest                               | 119,80 |
| Apr---14 | PR120                     | Peppers                         | Garden and Grounds                    | 6,00   |
| Apr---14 | PR120                     | Peppers                         | JWC Fruit and Veg                     | 40,00  |
| Apr---14 | F2001                     | Peppers                         | Pick n Pay                            | 24,99  |
| Apr---14 | PR120                     | Pilchards in tomato sauce       | Bidvest                               | 520,13 |
| Apr---14 | CR001                     | Pilchards in tomato sauce       | Bidvest                               | 900,00 |
| Apr---14 | Young farmers --- interns | Pilchards in tomato sauce       | Pick n Pay                            | 22,80  |
| Apr---14 | F2001                     | Pineapples                      | Pick n Pay                            | 19,98  |
| Apr---14 | PR120                     | Potatoes                        | Green Road                            | 216,00 |
| Apr---14 | Creche                    | Potatoes                        | JWC Fruit and Veg                     | 110,00 |
| Apr---14 | PR120                     | Potatoes                        | JWC Fruit and Veg                     | 280,00 |
| Apr---14 | F2001                     | Potatoes                        | JWC Fruit and Veg                     | 160,00 |
| Apr---14 | PR120                     | Pudding sage                    | Bidvest                               | 45,65  |
| Apr---14 | F2F                       | Rice                            | Checkers                              | 161,90 |
| Apr---14 | Aftercare                 | Rice                            | Shoprite Checkers                     | 10,99  |
| Apr---14 | PR120                     | Rice brown                      | Bidvest                               | 479,64 |
| Apr---14 | F2001                     | Rice brown                      | Bidvest                               | 283,60 |
| Apr---14 | CR001                     | Rice brown                      | Bidvest                               | 234,00 |
| Apr---14 | F2001                     | Rooti pastry                    | New Forest Meat Hyper                 | 13,99  |
| Apr---14 | F2001                     | Roti balls                      | Pacific Dried Fruit                   | 16,95  |
| Apr---14 | GC000                     | Rusks                           | Ticklemouse                           | 625,00 |
| Apr---14 | PR120                     | Salt                            | Bidvest                               | 32,19  |
| Apr---14 | F2001                     | salt                            | Bidvest                               | 48,29  |
| Apr---14 | F2001                     | sauce                           | New Forest Meat Hyper                 | 24,90  |
| Apr---14 | PR120                     | Souppowder                      | Bidvest                               | 82,76  |
| Apr---14 | F2001                     | Souppowder                      | Bidvest                               | 82,76  |
| Apr---14 | F2001                     | Soy sauce                       | Bidvest                               | 90,00  |
| Apr---14 | CR001                     | Spices                          | Bidvest                               | 30,00  |
| Apr---14 | F2001                     | Spices -- cloves, nutmeg, mixed | Pick n Pay                            | 82,47  |
| Apr---14 | PR120                     | Spices curry and tumeric        | Bidvest                               | 258,10 |
| Apr---14 | F2001                     | Spices curry and tumeric        | Bidvest                               | 123,73 |
| Apr---14 | PR120                     | Spinach                         | Green Road                            | 108,00 |
| Apr---14 | PR120                     | Spring Onions                   | Garden and Grounds                    | 6,00   |
| Apr---14 | F2001                     | Spring rolls                    | Pacific Dried Fruit                   | 45,00  |
| Apr---14 | PR120                     | Sugar                           | National Pride Trading                | 35,00  |
| Apr---14 | Overheads                 | Sugar brown                     | Bidvest                               | 116,85 |
| Apr---14 | F2001                     | Sugar brown                     | Bidvest                               | 58,43  |
| Apr---14 | CR001                     | Sugar brown                     | Bidvest                               | 200,00 |
| Apr---14 | F2001                     | Sugar white                     | Bidvest                               | 183,59 |
| Apr---14 | F2001                     | Sweet melon                     | Superspa                              | 50,97  |
| Apr---14 | F2001                     | Sweet melon                     | Superspa                              | 13,99  |
| Apr---14 | F2001                     | Sweetcorn                       | Superspa                              | 41,97  |
| Apr---14 | Overheads                 | Teabags                         | Bidvest                               | 66,37  |
| Apr---14 | F2001                     | tomatopaste                     | Bidvest                               | 132,43 |
| Apr---14 | F2001                     | tomato sauce                    | Bidvest                               | 132,99 |
| Apr---14 | F2001                     | tomatoes                        | Garden and Grounds                    | 24,00  |
| Apr---14 | PR120                     | tomatoes                        | Garden and Grounds                    | 36,00  |

|          |       |             |                   |       |
|----------|-------|-------------|-------------------|-------|
| Apr---14 | F2001 | Tomatoes    | JWC Fruit and Veg | 40,00 |
| Apr---14 | GC000 | Tuna canned | Pick n Pay        | 51,80 |
| Apr---14 | F2001 | Tuna canned | Pick n Pay        | 38,85 |
| Apr---14 | F2001 | Vinegar     | Bidvest           | 39,63 |
| Apr---14 | F2001 | Wild berry  | Superspa          | 22,99 |
| Apr---14 | UM001 | Wine white  | Pick N Pay        | 89,99 |
| Apr---14 | F2001 | Yoghurt     | Pick n Pay        | 15,90 |
| Apr---14 | F2001 | Yogurt      | Pick n Pay        | 17,50 |

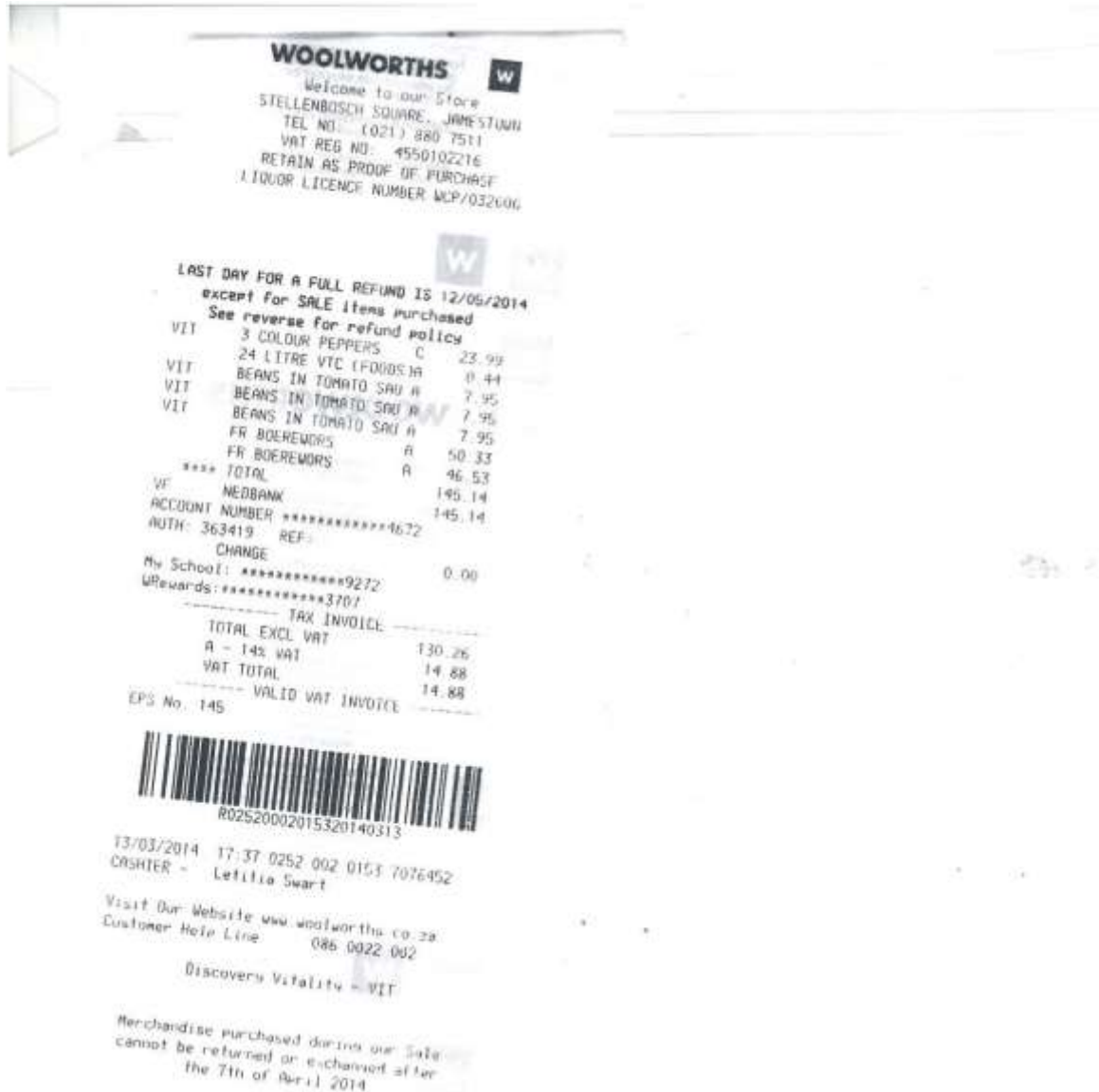
### FOOD PURCHASING AT THE SUSTAINABILITY INSTITUTE - - - MAY 2014

| WHEN?   | WHO?                | WHAT?                        | WHERE?                   | HOW MUCH? (ZAR) |
|---------|---------------------|------------------------------|--------------------------|-----------------|
| May--14 | F2001               | Acocado dip                  | Shoprite Checkers        | 6,99            |
| May--14 | BA030               | Apples                       | The Green Road           | 228,00          |
| May--14 | F2001               | Avacado                      | Shoprite Checkers        | 7,98            |
| May--14 | GC000 Greencafé     | Avocado                      | Pick n Pay               | 20,00           |
| May--14 | PR120               | Baby marrows                 | JWC Fruit and Veg        | 60,00           |
| May--14 | GC000               | Baking powder                | Bidvest                  | 31,67           |
| May--14 | F2001               | Bananas                      | Shoprite Checkers        | 17,10           |
| May--14 | PR120               | Beans                        | Garden and Grounds       | 48,00           |
| May--14 | Crecehe             | Beans                        | Garden and Grounds       | 24,00           |
| May--14 | F2001               | Beans                        | Garden and Grounds       | 48,00           |
| May--14 | PR120               | Beanssugar                   | Bidvest                  | 138,90          |
| May--14 | F2001               | Beetroot                     | The Green Road           | 162,00          |
| May--14 | CR001               | Beetroot                     | The Green Road           | 108,00          |
| May--14 | GC000               | Biltong Crisps               | Roostock Vegi Crisps     | 365,00          |
| May--14 | Green café          | Biltong Crisps               | Rootstock Vegi Crisps    | 523,22          |
| May--14 | F2001               | Biscuits                     | Shoprite Checkers        | 102,97          |
| May--14 | GC000               | Biscuits                     | Ticklemouse Country Fare | 298,11          |
| May--14 | GC000               | Biscuits                     | Ticklemouse Country Fare | 298,11          |
| May--14 | F2001               | Bites Butternut and almond   | Shoprite Checkers        | 36,99           |
| May--14 | F2001               | Blomkool                     | Garden and Grounds       | 8,00            |
| May--14 | Agri internships    | Bookie french polny          | Pick n pay               | 45,98           |
| May--14 | Agri internships    | Bread brown                  | Pick n pay               | 63,54           |
| May--14 | PR120               | Brinjals                     | JWC Fruit and Veg        | 60,00           |
| May--14 | F2001               | Broccoli                     | JWC Fruit and Veg        | 130,00          |
| May--14 | PR120               | Broccoli                     | JWC Fruit and Veg        | 96,00           |
| May--14 | F2001               | Broccoli                     | The Green Road           | 135,00          |
| May--14 | GC000               | Butter                       | Bidvest                  | 295,26          |
| May--14 | F2001               | Butter                       | Bidvest                  | 295,26          |
| May--14 | CR001               | Butternut                    | The Green Road           | 47,25           |
| May--14 | PR120               | Butternut                    | The Green Road           | 135,00          |
| May--14 | CR001               | Cabbage                      | The Green Road           | 21,60           |
| May--14 | PR120               | Cabbages                     | JWC Fruit and Veg        | 45,00           |
| May--14 | F2001               | Cakeflour                    | Bidvest                  | 242,32          |
| May--14 | CR001               | Cakeflour                    | Bidvest                  | 56,50           |
| May--14 | Other food 1355/000 | Carrots                      | Fruit and Veg City       | 29,99           |
| May--14 | PR120               | Carrots                      | JWC Fruit and Veg        | 50,00           |
| May--14 | F2001               | Carrots                      | Shoprite Checkers        | 23,96           |
| May--14 | F2001               | Carrots                      | The Green Road           | 172,05          |
| May--14 | CR001               | Carrots                      | The Green Road           | 108,00          |
| May--14 | PR120               | Carrots                      | The Green Road           | 32,40           |
| May--14 | F2001               | Cauliflower                  | JWC Fruit and Veg        | 130,00          |
| May--14 | PR120               | Cauliflower                  | JWC Fruit and Veg        | 96,00           |
| May--14 | F2001               | cauliflower                  | Shoprite Checkers        | 47,96           |
| May--14 | GC000 Greencafé     | Cereal weetbix               | Shoprite Checkers        | 39,99           |
| May--14 | GC000 Greencafé     | Cheddar cheese               | Shoprite Checkers        | 82,99           |
| May--14 | F2001               | Cheese                       | Bidvest                  | 130,18          |
| May--14 | CR001               | Cheese                       | Bidvest                  | 72,96           |
| May--14 | PR120               | Cheese                       | Bidvest                  | 750,41          |
| May--14 | GH000               | Cheese                       | Bidvest                  | 147,40          |
| May--14 | F2001               | Cheesy nuggets               | Pacificfoods             | 30,00           |
| May--14 | GC000 Greencafé     | Chicken breasts              | Shoprite Checkers        | 35,98           |
| May--14 | F2001               | Chicken nuggets              | Pacificfoods             | 50,00           |
| May--14 | F2001               | Chicken spring rolls         | Pacificfoods             | 100,00          |
| May--14 | GC000               | Chicken whole                | The Green Road           | 495,96          |
| May--14 | F2001               | Chicken wings frozen         | Kekkel EnKraai           | 169,00          |
| May--14 | PR120               | Chickens                     | The Green Road           | 908,76          |
| May--14 | CR001               | Chickens whole               | The Green Road           | 962,64          |
| May--14 | GC000 Greencafé     | Chocolate Nestle             | Shoprite Checkers        | 21,99           |
| May--14 | GH000               | Coffee                       | Bidvest                  | 149,68          |
| May--14 | PR120               | Corn cobs                    | Bidvest                  | 37,50           |
| May--14 | F2001               | Corn cobs                    | Shoprite Checkers        | 22,99           |
| May--14 | CR001               | Corn cobs                    | The Green Road           | 47,50           |
| May--14 | PR120               | Corn cobs                    | The Green Road           | 71,25           |
| May--14 | Agri internships    | Corned meat canned           | Pick n pay               | 29,80           |
| May--14 | Agri internships    | Corned meat canned           | Pick n pay               | 14,90           |
| May--14 | F2001               | Cucumber                     | Shoprite Checkers        | 44,95           |
| May--14 | GC000 Greencafé     | Cucumber                     | Shoprite Checkers        | 15,98           |
| May--14 | F2001               | Danish pastries lemon butter | Pacificfoods             | 20,00           |
| May--14 | GC000 Greencafé     | Dried fruit                  | Pacificfoods             | 70,00           |
| May--14 | GC000               | Eggs Cage/free range?        | The Green Road           | 187,50          |

|          |                  |                                  |                            |          |
|----------|------------------|----------------------------------|----------------------------|----------|
| May---14 | F2001            | Eggs Cage/free range?            | The Green Road             | 120,00   |
| May---14 | GC000            | Eggs free range                  | Homegrown free range eggs  | 116,00   |
| May---14 | F2001            | Eggs free range                  | Homegrown free range eggs  | 116,00   |
| May---14 | CR001            | Eggs free range                  | Homegrown free range eggs  | 58,00    |
| May---14 | PR120            | Eggs free range                  | Homegrown free range eggs  | 58,00    |
| May---14 | GC000            | Espresso coffee                  | Legado                     | 539,97   |
| May---14 | GC000            | Espresso coffee                  | Legado                     | 360,01   |
| May---14 | SHIMA COOKING    | Food                             | Shoprite Checkers          | 1 200,00 |
| May---14 | F2001            | Fresh cream                      | Pick n Pay                 | 47,97    |
| May---14 | F2001            | Fresh cream                      | Shoprite Checkers          | 77,40    |
| May---14 | F2001            | Grapefruit                       | Shoprite Checkers          | 12,24    |
| May---14 | F2001            | Halfmoons 20S                    | Pacificfoods               | 35,00    |
| May---14 | GC000            | Hot choc powder                  | Bidvest                    | 75,32    |
| May---14 | CR001            | Instant coffee                   | Bidvest                    | 132,24   |
| May---14 | Agri internships | Instant coffee                   | Pick n pay                 | 67,99    |
| May---14 | Agri internships | Instant coffee                   | Pick n pay                 | 67,99    |
| May---14 | GC000            | Juice                            | Bidvest                    | 189,33   |
| May---14 | F2001            | Kiwi Fruit                       | Pick n Pay                 | 5,00     |
| May---14 | F2001            | Kiwi Fruit                       | Shoprite Checkers          | 44,91    |
| May---14 | F2001            | Lemon juice                      | Bidvest                    | 29,64    |
| May---14 | PR120            | Lentils dried                    | Bidvest                    | 271,80   |
| May---14 | GC000            | Mangos                           | The Green Road             | 48,00    |
| May---14 | F2001            | Mayaonaise                       | Bidvest                    | 82,08    |
| May---14 | GC000            | Mayonaise                        | Bidvest                    | 164,16   |
| May---14 | Agri internships | Milk long                        | Pick n pay                 | 115,98   |
| May---14 | GC000            | Milk long life                   | Bidvest                    | 715,50   |
| May---14 | CR001            | Milk long life                   | Bidvest                    | 194,94   |
| May---14 | PR120            | Milk long life                   | Bidvest                    | 394,20   |
| May---14 | GH000            | Milk long life                   | Bidvest                    | 649,80   |
| May---14 | Agri internships | Milk long life                   | Pick n Pay                 | 76,98    |
| May---14 | GC000 Green café | Milk long life                   | Pick n Pay                 | 269,95   |
| May---14 | F2001            | Mince pies                       | Pacificfoods               | 100,00   |
| May---14 | F2001            | Mince samoosas                   | Pacificfoods               | 189,95   |
| May---14 | GC000            | Mixed crisps                     | Roostock Vegi Crisps       | 251,17   |
| May---14 | Farm to Fork     | Mixed juice                      | Juice Direct               | 423,10   |
| May---14 | F2001            | Mixed juices                     | Juice Direct Winelands     | 214,40   |
| May---14 | PR120            | Mixed lettuce                    | Garden and Grounds         | 12,00    |
| May---14 | F2001            | Mushrooms                        | Pick n Pay                 | 56,97    |
| May---14 | F2001            | Naartjies                        | The Green Road             | 70,00    |
| May---14 | GC000            | Nacho chips                      | Mexicorn                   | 150,48   |
| May---14 | GC000            | Nacho chips                      | Mexicorn                   | 300,96   |
| May---14 | CR001            | Onions                           | The Green Road             | 108,00   |
| May---14 | PR120            | Onions                           | The Green Road             | 108,00   |
| May---14 | GC000 Green café | Open Unknown                     | Pacificfoods               | 62,12    |
| May---14 | F2001            | Open?                            | Pacificfoods               | 81,00    |
| May---14 | BA030            | Oranges                          | The Green Road             | 155,25   |
| May---14 | CR001            | Oranges                          | The Green Road             | 108,00   |
| May---14 | F2001            | Papaya                           | Pick n Pay                 | 65,98    |
| May---14 | F2001            | Pasta                            | Bidvest                    | 136,12   |
| May---14 | CR001            | Pasta                            | Bidvest                    | 260,47   |
| May---14 | Agri internships | Peanut butter                    | Pick n pay                 | 83,98    |
| May---14 | GC000 Green café | Peanuts/raisins                  | Pacificfoods               | 54,00    |
| May---14 | F2001            | Pear                             | Shoprite Checkers          | 11,45    |
| May---14 | BA030            | Pears                            | The Green Road             | 180,00   |
| May---14 | PR120            | Peas splitgreen                  | Bidvest                    | 119,80   |
| May---14 | PR120            | Peppers                          | Garden and Grounds         | 12,00    |
| May---14 | PR120            | Peppers                          | JWC Fruit and Veg          | 20,00    |
| May---14 | F2001            | Peppers                          | Shoprite Checkers          | 23,98    |
| May---14 | GC000 Green café | Peppers                          | Shoprite Checkers          | 12,99    |
| May---14 | F2001            | Persimons                        | The Green Road             | 23,00    |
| May---14 | CR001            | Pilchards in tomato sauce canned | Bidvest                    | 168,00   |
| May---14 | PR120            | Pilchards in tomato sauce canned | Bidvest                    | 504,00   |
| May---14 | Agri internships | Pilchards in tomato sauce canned | Pick n pay                 | 30,98    |
| May---14 | F2001            | Pineapples                       | Pick n Pay                 | 27,00    |
| May---14 | GC000 Green café | Pineapples                       | Pick n Pay                 |          |
| May---14 | F2001            | Plums                            | Shoprite Checkers          | 23,98    |
| May---14 | F2001            | Potatoes                         | JWC Fruit and Veg          | 90,00    |
| May---14 | PR120            | POTatoes                         | JWC Fruit and Veg          | 150,00   |
| May---14 | PR120            | Potatoes                         | The Green Road             | 432,00   |
| May---14 | CR001            | Premix muffin mix                | Bidvest                    | 78,94    |
| May---14 | PR120            | Rice brown                       | Bidvest                    | 479,64   |
| May---14 | F2001            | Rooti/pastries                   | New Forest Hyper Meat Mart | 71,96    |
| May---14 | PR120            | Salt                             | Bidvest                    | 16,10    |
| May---14 | GC000 Green café | Salt                             | Shoprite Checkers          | 8,89     |
| May---14 | F2001            | Samoosas                         | Shoprite Checkers          | 39,99    |
| May---14 | F2001            | Sauces                           | New Forest Hyper Meat Mart | 25,00    |
| May---14 | GC000            | Spice(pepper)                    | Bidvest                    | 78,84    |
| May---14 | F2001            | Spices                           | Bidvest                    | 82,68    |
| May---14 | PR120            | Spices                           | Bidvest                    | 408,63   |
| May---14 | F2001            | Spices                           | Pick n Pay                 | 55,56    |
| May---14 | F2001            | Spring rolls vegetable           | Pacificfoods               | 189,95   |
| May---14 | Agri internships | Strawberry jam                   | Pick n pay                 | 33,99    |
| May---14 | CR001            | Sugar brown                      | Bidvest                    | 175,28   |
| May---14 | GH000            | Sugar brown                      | Bidvest                    | 270,26   |
| May---14 | GC000 Green café | Sugar brown                      | Pick n Pay                 | 35,99    |

|          |                  |                         |                            |        |
|----------|------------------|-------------------------|----------------------------|--------|
| May---14 | GC000 Greencafé  | Sugar brown             | Shoprite Checkers          | 19,99  |
| May---14 | Agri internships | Sugar white             | Pick n pay                 | 39,80  |
| May---14 | F2001            | Sugar white             | Shoprite Checkers          | 27,99  |
| May---14 | GC000            | Sweet chillisauce       | Bidvest                    | 62,70  |
| May---14 | F2001            | Sweet chillisauce       | Bidvest                    | 62,70  |
| May---14 | GC000            | Teabags                 | Bidvest                    | 106,47 |
| May---14 | F2001            | Teabags                 | Bidvest                    | 65,48  |
| May---14 | GH000            | Teabags                 | Bidvest                    | 151,20 |
| May---14 | F2001            | Teabags                 | Shoprite Checkers          | 39,48  |
| May---14 | GC000 Greencafé  | Teabags                 | Shoprite Checkers          | 45,48  |
| May---14 | F2001            | Tomatoes                | JWC Fruit and Veg          | 20,00  |
| May---14 | PR120            | Tomatoes                | JWC Fruit and Veg          | 30,00  |
| May---14 | GC000 Greencafé  | Tomatoes                | Pacificfoods               | 40,00  |
| May---14 | F2001            | Tomatoes                | Pick n Pay                 | 36,65  |
| May---14 | GC000 Greencafé  | Tomatoes                | Pick n Pay                 | 18,00  |
| May---14 | F2001            | Tomatoes                | Shoprite Checkers          | 13,99  |
| May---14 | F2001            | Tuna canned             | Pacificfoods               | 35,96  |
| May---14 | GC000 Greencafé  | Tuna canned             | Pacificfoods               | 35,96  |
| May---14 | GC000 Greencafé  | Tuna canned             | Shoprite Checkers          | 24,98  |
| May---14 | F2001            | Unknown/misc            | New Forest Hyper Meat Mart | 80,69  |
| May---14 | F2001            | Vinegar apple cider     | Bidvest                    | 25,55  |
| May---14 | F2001            | Wine red and white      | Spier                      | 190,00 |
| May---14 | F2001            | Yeast                   | Shoprite Checkers          | 75,75  |
| May---14 | F2001            | Yogurt various flavours | Pick n Pay                 | 48,48  |

**Appendix 3: Examples of receipts analysed during the period of research**



STELLENBOSCH WALDORF SCHOOL

SCHOOL SHOP

--●●●● ●●—●●●●●●●●●● ●●

10 @ \2 00

|                      |       |
|----------------------|-------|
| )ther                | ,2000 |
| Jther                |       |
| Other                | 20.00 |
| 0.355 K9 @ 160 00/K9 | 10.00 |
| CamPhIII Cheese      |       |
| Other                | 56.80 |
|                      | 30.00 |

13.355 Total 236.80

**Card 236.80**

Thu 13- 3-2014 9 01.59

"5514 L0101 C\erK1

BUY ORGANIC

STAY HEALTHY

**Pick 'n Pay**

STELLENBOSCH SQUARE

021 880 1670

CASHIER: Veronique Daars

MAIZE SUPER 2.50KG 20.69#

DUE VAT INCL 20.69

-----TELR-----

VIS. 20.69

363980

TOTAL ITEMS:

--- TAX INVOICE ---

VAT INCLUDED 0.00 0.00

H ZERO RATED

e NON-SUPPLY

VIT DISCOVERY VITALITY

----- VAT REG NO. 415021436 1-----

Liquor Lic. WCP/032613/032666  
 PLEASE RETAIN AS YOUR GUARANTEE  
 CUSTOMER CARE LINE: 0800 117 288

WEBSITE: www.picknpay.co.za

THANK YOU FOR SHOPPING WITH US.

-----SMAH1 SHOPPER-----

SMAH1 shopper card # \*\*\*\* \* 4858

As a SMAH1 shopper you have earned:

Basic Points: 20

Your Points balance 361

Rands available to SPGO 3 R3.61

Visit the kiosk for more products.

Sorry the queue is long. We accept



for b\ 11 payments i n store.

•049938 32?2 32220068 6 13.03.14 17:46



99910232220060499-".,88

cut here -----

-----SMART SHOPPER VOUCHER-----

**Earn 2x poi nts on  
your ne>t shop**  
Present voucher before payment

Val Id frOI 10/03/2014 to 23/03/2014

::,rnart shopper card # 11rx•1"•••11••"-w4858



9901007024147

Other subject to product avai labiI itv.  
Val id for enrol led smart shoppers Onl y .  
Onl y avditable at Pick n Pay store-. tn  
South Africa. Terns and conditions appl y .

## Appendix 4 - List of semi-structured interviews

### Interviews with members of the Sustainability Institute

| Date         | Interviewee (Person interviewed) | Interviewee role                       | Duration Interviewee employed at Si | Topic of discussion      | Type of interview | Duration of interview |
|--------------|----------------------------------|--|-------------------------------------|--------------------------|-------------------|-----------------------|
| March - 2014 | Anton Otto                       | Member of the Youth After Care program | -                                   | Food Systems at the S.I. | Informal          | 45 min                |
| 28.08.2015   | Bradley Bergh                    | Head of Finance 2015                   | 6 months                            | Food Systems at the S.I. | Recorded          | 40 min                |
| 21.02.2014   | Bryce Anderson                   | Leader from Gardens & Grounds project  | 10 years                            | Food Systems at the S.I. | Recorded          | 45 min                |
| 11.02.2014   | Denise Curi                      | Volunteer from Schumacher College      | 1 month                             | Food Systems at the S.I. | Recorded          | 45 min                |
| 27.06.2014   | Litha Magida                     | General Manager at the SI              | -                                   | Digestion Session        | Focus Group       | 45 min                |
| 11.03.2014   | Louise Bezuindehout              | Former Head of Finance                 | 4,5 years                           | Food Systems at the S.I. | Recorded          | 20 min                |
| March - 2014 | Luke Metelerkamp (a)             | Head of Food Department                | -                                   | Food Systems at the S.I. | Recorded          | 30 min                |
| 27.06.2014   | Luke Metelerkamp (b)             | Head of Food Department                | -                                   | Digestion Session        | Focus Group       |                       |
| March - 2014 | Mathilda Davids                  | Manager at Farm 2 Fork and Guest House | -                                   | Food Systems at the S.I. | Informal          |                       |
| 27.06.2014   | Nobelusi Kenyana                 | Intern                                 | -                                   | Digestion Session        | Focus Group       |                       |
|              | Rene Human                       | Finance                                | 6 years                             | Food Systems at the S.I. | Informal          |                       |
| 25.02.2014   | Tania Klink                      | Events Manager                         | 5 years                             | Food Systems at the S.I. | Recorded          | 20 min                |
| 27.06.2014   | Tania Klink (b)                  | Events Manager                         | -                                   | Digestion Session        | Focus Group       |                       |
| 19.02.2014   | Tracy Ward                       | Leader of the Youth Aftercare Project  | 7 years                             | Food Systems at the S.I. | Recorded          | 45 min                |

### Other interviews (people that are not connected to the Sustainability Institute)

| Interviewee (Person interviewed) | Interviewee role |
|----------------------------------|------------------|
|----------------------------------|------------------|

|                    |                        |  |
|--------------------|------------------------|--|
| September --- 2015 | Juliana Schneider      | Founder of Schumacher College --- Brazil                         |
| February --- 2014  | Tom McLaughlin         | Member of the Sustainability team at Woolworths --- South Africa |
| June --- 2013      | Natasha Mendes Gabriel | Co---Founder of Instituto Elos --- Brazil                        |
| February --- 2015  | Giampaolo Buso         | Co---Founder of Paripassu (Food Traceability) --- Brazil         |

**Appendix 5: List of all the food items purchased during the Cooking Sessions**

| WHAT  | WHERE             | ITEM | POINTS |
|---|-------------------|------|--------|
| 2,5kg Flour – (Eureka Stone ground) (2 pontos)  | Eureka Mills      | 1    | 2      |
| 7kg de oxtail --- (Farmer Angus) (2 pontos)   | Farmer Angus      | 1    | 2      |
| 10ml fennel – (Gardens and Grounds Lynedoch) (3 pontos)   | Gardens n Grounds | 1    | 3      |
| 15g Rosemary – (Gardens and Grounds Lynedoch) (3 pontos)  | Gardens n Grounds | 1    | 3      |
| 2 ramos de alecrim – (Gardens and Grounds Lynedoch) (2 pontos)  | Gardens n Grounds | 1    | 3      |
| 4 Brinjals --- Lynedoch (Gardens and Grounds) (3 pontos)  | Gardens n Grounds | 1    | 3      |
| 6 Lemon leaves – (Gardens and Grounds Lynedoch) (3 pontos)  | Gardens n Grounds | 1    | 3      |
| 1 bunch carrots – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 1 bunch Spring Onions (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 1 cup of milk – (Green Road) (2 pontos)   | Green Road        | 1    | 3      |
| 1 kg cenouras --- (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 10 Onions – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 10 onions (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 100g Chives – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 12 bunches spinach – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 150ml milk for the bread – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 1kg de tomates – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 1kg potatoes – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 2 butter nuts – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 2 eggs (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 2 green peppers – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 2 kgs of tomatoes – (Eric Swart's farm) (2 pontos)  | Green Road        | 1    | 2      |
| 2 kgs Sweet Potatoes – (Eric Swart's Farm) (2 pontos)   | Green Road        | 1    | 2      |
| 2 medium onions --- (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 2 Onions -- (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 2 Onions – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 250g Kohlrabi – (Green Road) (1 ponto)  | Green Road        | 1    | 2      |
| 250g of Olives – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 2kg potatoes --- (Eric Swart's Farm) (2 pontos)   | Green Road        | 1    | 2      |
| 2kg Potatoes – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 3 eggs – (Green Road) (3 pontos)  | Green Road        | 1    | 2      |
| 4 cebolas – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 4 leeks – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 4 onions – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 400g camphill cheese – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 400g carrots – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 400g Feta cheese --- (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 45ml Fruity Sweet Chilli Sauce or Chutney or Apricot jam or a combination --- (Green Road) (2 pontos) | Green Road        | 1    | 2      |
| 5 bunches of Spinach – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 5 Bunches of Spinach - (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 5 garlic cloves – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 5 Lettuce's heads – (Eric Swart's farm) (2 pontos)  | Green Road        | 1    | 2      |
| 5 onions – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 5 Tomatoes – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 500g mince Green Road (2 pontos)  | Green Road        | 1    | 2      |
| 500g of Turnips – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 500g Onions – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 500g organic rice – (Green Road) ( 2 pontos)  | Green Road        | 1    | 2      |
| 500g sweet potatoes – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 8 Butternuts --- (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| 8kg Sweet Potatoes – (Green Road) (2 pontos)  | Green Road        | 1    | 2      |
| Half a hand full of raisins – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| Mixed herbs – (Green Road) (2 pontos)   | Green Road        | 1    | 2      |
| 5kg hake fish (Local Fish Monger) (2 pontos)  | Local Fish Monger | 1    | 2      |
| 2 tea spoons of Honey – (Luke's friend) (2 pontos)  | Luke's Friend     | 1    | 2      |
| 10g fine cinnamon --- (Organic Zone) (2 pontos)   | Organic Zone      | 1    | 2      |
| 50g curry powder --- (Organic Zone) (2 pontos)  | Organic Zone      | 1    | 2      |
| 60g fine coriander --- (Organic Zone) (2 pontos)  | Organic Zone      | 1    | 2      |
| 8 sliced onions --- (Organic Zone) (2 pontos)   | Organic Zone      | 1    | 2      |
| 80 ml lemon juice --- (Organic Zone) (2 pontos)   | Organic Zone      | 1    | 2      |
| 80g masala --- powder, or to taste --- (Organic Zone) (2 pontos)                                      | Organic Zone      | 1    | 2      |

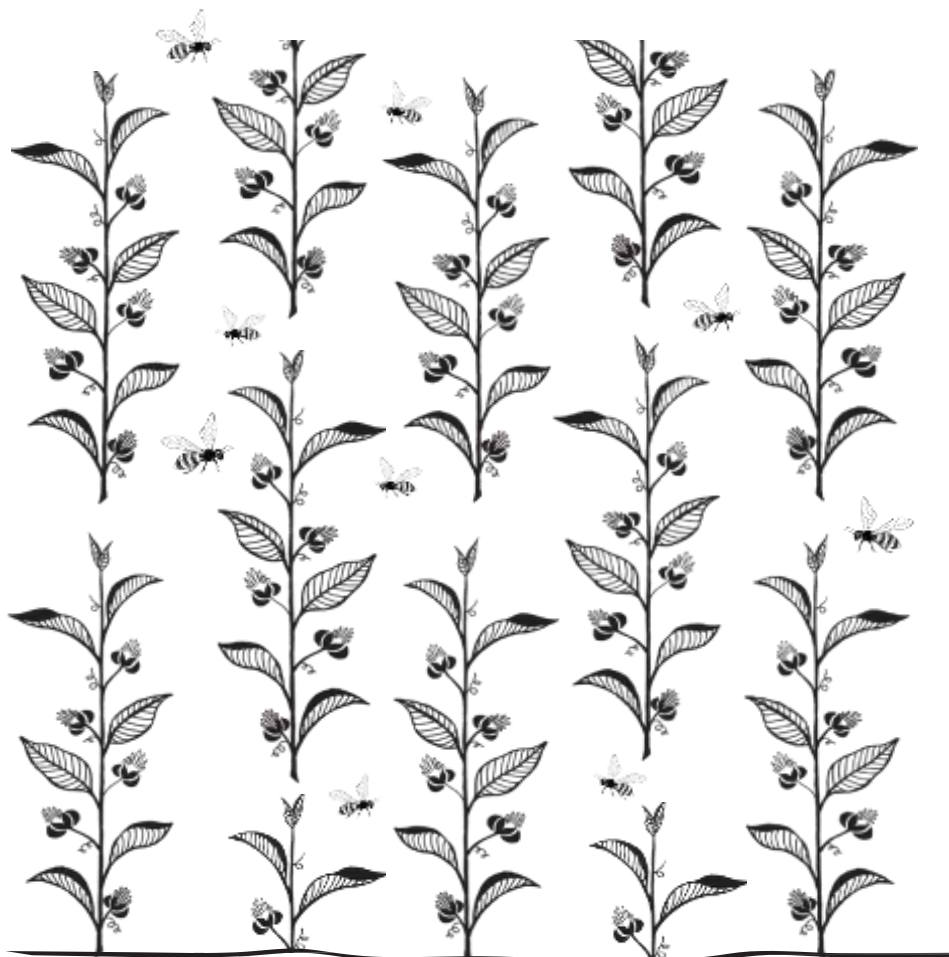
|  |            |   |   |
|--|------------|---|---|
| 1 can of tomato pure – (Pick n Pay) (1 ponto)                              | Pick n Pay | 1 | 1 |
| 1 cup of cream – (Pick n Pay) (1 ponto)                                    | Pick n Pay | 1 | 1 |
| 1 stick of cinnamon – (Pick n Pay) (1 ponto)                               | Pick n Pay | 1 | 1 |
| 1 table spoon Salt (Pick n Pay) (1 ponto)                                  | Pick n Pay | 1 | 1 |
| 1 tbsp crushed ginger – (Pick n Pay) (1 ponto)                             | Pick n Pay | 1 | 1 |
| 1 tea spoon black pepper – (Pick n Pay) (1 ponto)                          | Pick n Pay | 1 | 1 |
| 1 tea spoon of curry – (Pick n Pay) (1 ponto)                              | Pick n Pay | 1 | 1 |
| 1 tea spoon of periperi – (Pick n Pay) (1 ponto)                           | Pick n Pay | 1 | 1 |
| 1,5kg Maize meal --- (Pick n Pay) (1 ponto)                                | Pick n Pay | 1 | 1 |
| 1,5kg flour (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 10 Bay Leaves (Pick n Pay) (1 ponto)                                       | Pick n Pay | 1 | 1 |
| 10 dentes de alho – (Pick n Pay) (1 ponto)                                 | Pick n Pay | 1 | 1 |
| 10 Onions – (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 100g Butter (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 100ml custard powder (Pick n Pay) (1 ponto)                                | Pick n Pay | 1 | 1 |
| 100ml de óleo vegetal --- (Pick n Pay) (1 ponto)                           | Pick n Pay | 1 | 1 |
| 100ml de óleo vegetal – (Pick n Pay) (1 ponto)                             | Pick n Pay | 1 | 1 |
| 100ml Old Brown Sherry (South African) – optional – (Pick n Pay) (1 ponto) | Pick n Pay | 1 | 1 |
| 100ml vegetable oil – (Pick n Pay) (1 ponto)                               | Pick n Pay | 1 | 1 |
| 10ml cumin – (Pick n Pay) (1 ponto)  | Pick n Pay | 1 | 1 |
| 10ml Turmeric – (Pick n Pay) (1 ponto)                                     | Pick n Pay | 1 | 1 |
| 120g apricot jam --- (Pick n Pay) (1 ponto)                                | Pick n Pay | 1 | 1 |
| 15 lemon- of bay leaves - (Pick n Pay) (1 ponto)                           | Pick n Pay | 1 | 1 |
| 150g Cherries --- (Pick n Pay) (1 ponto)                                   | Pick n Pay | 1 | 1 |
| 150ml vegetable oil (Pick n Pay) (1 ponto)                                 | Pick n Pay | 1 | 1 |
| 16 eggs beaten --- (Pick n Pay) (1 ponto)                                  | Pick n Pay | 1 | 1 |
| 1kg Flour – (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 1kg Maize meal --- grits --- (Pick n Pay) (1 ponto)                        | Pick n Pay | 1 | 1 |
| 1kg of pasta like farfalle (Pick n Pay) (1 ponto)                          | Pick n Pay | 1 | 1 |
| 1l heavy cream – (Pick n Pay) (1 ponto)                                    | Pick n Pay | 1 | 1 |
| 2l of full cream milk --- (Pick n Pay) (1 ponto)                           | Pick n Pay | 1 | 1 |
| 2 liters heavy cream -- (Pick n Pay) (1 ponto)                             | Pick n Pay | 1 | 1 |
| 2 slices of bread soaked in milk (Pick n Pay) (1 ponto)                    | Pick n Pay | 1 | 1 |
| 2,5 kg maize meal – (Pick n Pay) (1 ponto)                                 | Pick n Pay | 1 | 1 |
| 2,5kg Flour – (Pick n Pay) (1 ponto)                                       | Pick n Pay | 1 | 1 |
| 2,5kg sugar (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 200g Butter – (Pick n Pay) (1 ponto)                                       | Pick n Pay | 1 | 1 |
| 20g chopped fresh red chillies --- (Pick n Pay) (1 ponto)                  | Pick n Pay | 1 | 1 |
| 20g de turmeric – (Pick n Pay) (1 ponto)                                   | Pick n Pay | 1 | 1 |
| 20g salt – (Pick n Pay) (1 ponto)  | Pick n Pay | 1 | 1 |
| 20g sugar – (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 20ml salt (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 24g cream of soda (Pick n Pay) (1 ponto)                                   | Pick n Pay | 1 | 1 |
| 24g tartaric acid (Pick n Pay) (1 ponto)                                   | Pick n Pay | 1 | 1 |
| 3 table spoons oleo vegetal – (Pick n Pay)(1 ponto)                        | Pick n Pay | 1 | 1 |
| 3 table spoons vegetable oil – (Pick n Pay) (1 ponto)                      | Pick n Pay | 1 | 1 |
| 3 tbsp garlic – (Pick n Pay) (1 ponto)                                     | Pick n Pay | 1 | 1 |
| 300ml milk – (Pick n Pay) (1 ponto)  | Pick n Pay | 1 | 1 |
| 30g Nutmeg – (Pick n Pay) (1 ponto)  | Pick n Pay | 1 | 1 |
| 30ml Canola oil – (Pick n Pay) (1 ponto)                                   | Pick n Pay | 1 | 1 |
| 3kg Speckled Sugar Beans – (Pick n Pay) (1 ponto)                          | Pick n Pay | 1 | 1 |
| 3l samp mielies – (Pick n Pay)(1 ponto)                                    | Pick n Pay | 1 | 1 |
| 3l vinegar --- (Pick n Pay) (1 ponto)                                      | Pick n Pay | 1 | 1 |
| 4 Cans of fruit --- (Pick n Pay) (1 ponto)                                 | Pick n Pay | 1 | 1 |
| 4 table spoons baking powder --- (Pick n Pay) (1 ponto)                    | Pick n Pay | 1 | 1 |
| 400g Custard (powder) --- (Pick n Pay)(1 ponto)                            | Pick n Pay | 1 | 1 |
| 40g crushed garlic --- (Pick n Pay) (1 pontos)                             | Pick n Pay | 1 | 1 |
| 40g fresh ginger, grated --- (Pick n Pay) (1 ponto)                        | Pick n Pay | 1 | 1 |
| 40g salt, or to taste --- (Pick n Pay) (1 ponto)                           | Pick n Pay | 1 | 1 |
| 40g turmeric --- (Pick n Pay) (1 ponto)                                    | Pick n Pay | 1 | 1 |
| 500ml of vegetable oil for shallow frying (Pick n Pay) (1 ponto)           | Pick n Pay | 1 | 1 |
| 50g de curry – (Pick n Pay) (1 ponto)                                      | Pick n Pay | 1 | 1 |
| 50g ground ginger (Pick n Pay) (1 ponto)                                   | Pick n Pay | 1 | 1 |
| 50g Raja Spices –(Pick n Pay) (1 ponto)                                    | Pick n Pay | 1 | 1 |
| 50g yeast – (Pick n Pay) (1 ponto)   | Pick n Pay | 1 | 1 |
| 50ml oil – (Pick n Pay) (1 ponto)  | Pick n Pay | 1 | 1 |

|   |                     |   |   |
|---|---------------------|---|---|
| 50ml óleo vegetal – (Pick n Pay) (1 ponto)                                    | Pick n Pay          | 1 | 1 |
| 50ml vegetable oil – (Pick n Pay) (1 ponto)                                   | Pick n Pay          | 1 | 1 |
| 50ml vegetable oil – (Pick n Pay) (1 ponto)                                   | Pick n Pay          | 1 | 1 |
| 50ml Vegetable Oil – (Pick n Pay) (1 ponto)                                   | Pick n Pay          | 1 | 1 |
| 5ml borrie (turmeric + corn flour mixed) – (Pick n Pay) (1 ponto)             | Pick n Pay          | 1 | 1 |
| 6 Canned caramel --- (Pick n Pay) (1 ponto)                                   | Pick n Pay          | 1 | 1 |
| 6 Jelly sachets – use different flavors and colors --- (Pick n Pay) (1 ponto) | Pick n Pay          | 1 | 1 |
| 600g sugar --- (Pick n Pay) (1 ponto)   | Pick n Pay          | 1 | 1 |
| 60g coriander leaves --- (Pick n Pay) (1 ponto)                               | Pick n Pay          | 1 | 1 |
| 60g whole cumin seeds --- (Pick n Pay) (1 ponto)                              | Pick n Pay          | 1 | 1 |
| 8 table spoons of milk --- (Pick n Pay) (1 ponto)                             | Pick n Pay          | 1 | 1 |
| 800g self raising flour --- (Pick n Pay) (1 ponto)                            | Pick n Pay          | 1 | 1 |
| 800g softened unsalted butter --- (Pick n Pay) (1 ponto)                      | Pick n Pay          | 1 | 1 |
| 800g sugar --- (Pick n Pay) (1 ponto)   | Pick n Pay          | 1 | 1 |
| 80g curry poder – (Pick n Pay) (1 ponto)                                      | Pick n Pay          | 1 | 1 |
| 9 eggs beaten with a little water (Pick n Pay) (1 ponto)                      | Pick n Pay          | 1 | 1 |
| a hand full dry peaches -- (Pick n Pay) (1 ponto)                             | Pick n Pay          | 1 | 1 |
| Pinch of sugar – (Pick n Pay) (1 ponto)                                       | Pick n Pay          | 1 | 1 |
| Pinch of white pepper (Pick n Pay) (1 ponto)                                  | Pick n Pay          | 1 | 1 |
| Sal – (Pick n Pay) (1 ponto)  | Pick n Pay          | 1 | 1 |
| Salt – (Pick n Pay) (1 ponto)   | Pick n Pay          | 1 | 1 |
| Salt – (Pick n Pay) (1 ponto)   | Pick n Pay          | 1 | 1 |
| Salt – (Pick n Pay) (1 ponto)   | Pick n Pay          | 1 | 1 |
| Salt – (Pick n Pay) (1 ponto)   | Pick n Pay          | 1 | 1 |
| Salt – (Pick n Pay) (1 ponto)   | Pick n Pay          | 1 | 1 |
| Salt and pepper – (Pick n Pay) (1 ponto)                                      | Pick n Pay          | 1 | 1 |
| 5 kg de carne --- (Spier Farm) (2 pontos)                                     | Spier Farm          | 1 | 2 |
| 5 kg of Meat Paties – (Spier Farm) (2 pontos)                                 | Spier Farm          | 1 | 2 |
| 100g Yeast – (Woolworths) (1 ponto)   | Woolworths          | 1 | 1 |
| 100g Yeast – (Woolworths) (1 ponto)   | Woolworths          | 1 | 1 |
| 100ml --- Olive oil – (Woolworths) (1 ponto)                                  | Woolworths          | 1 | 1 |
| 10ml salt – (Woolworths) (1 ponto)  | Woolworths          | 1 | 1 |
| 150ml Olive oil – (Woolworths) (1 ponto)                                      | Woolworths          | 1 | 1 |
| 15ml curry powder – (Woolworths) (1 ponto)                                    | Woolworths          | 1 | 1 |
| 1kg boerewors – (Woolworths) (1 ponto)  | Woolworths          | 1 | 1 |
| 1kg de Boerewors – (Woolworths) (1 ponto)                                     | Woolworths          | 1 | 1 |
| 2.5ml pepper – (Woolworths) (1 ponto)   | Woolworths          | 1 | 1 |
| 3 canned beans – (Woolworths) (1 ponto)                                       | Woolworths          | 1 | 1 |
| 3 colour peppers – (Woolworths) (1 ponto)                                     | Woolworths          | 1 | 1 |
| 30ml lemon juice – (Woolworths) (1 ponto)                                     | Woolworths          | 1 | 1 |
| 50mg almond slivers – (Woolworths) (1 ponto)                                  | Woolworths          | 1 | 1 |
| pinch of pepper – (Woolworths) (1 ponto)                                      | Woolworths          | 1 | 1 |
| Pinch of Pepper – (Woolworths) (1 ponto)                                      | Woolworths          | 1 | 1 |
| pinch of Salt – (Woolworths) (1 ponto)  | Woolworths          | 1 | 1 |
| Pinch of Salt – (Woolworths) (1 ponto)  | Woolworths          | 1 | 1 |
| Pinch of Salt – (woolworths) (1 ponto)  | Woolworths          | 1 | 1 |
| Salt – (Woolworths) (1 ponto)   | Woolworths          | 1 | 1 |
| 100g Braai Spices --- (Atlas Spice Company) (2 points)                        | Atlas Spice Company | 1 | 2 |
| 10g Braai Spices – (Atlas Spice Company) (2 points)                           | Atlas Spice Company | 1 | 2 |
| 50g Braai Spices --- (Atlas Spice company) (2 points)                         | Atlas Spice Company | 1 | 2 |
| 80g chicken spice – (Atlas Spice Company) (2 points)                          | Atlas Spice Company | 1 | 2 |

## Appendix 6: Community and Food



# *Community & Food*



a recipe book by Eduardo Shimahara



The Sustainability Institute's Cookbook

# *Community & Food*

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**This cookbook is a small version of a Master Thesis written by Eduardo Shimahara to be launched at the end of 2015. It is part of a thesis that is not yet published, please do not distribute this copy. The full work will be under a Creative Commons license and free for downloading.**



*"We are increasingly disconnected both from the production of our food and from the joy of eating it."  
-Patel, 2012*







## *Introduction*

This mini version of a thesis describes the recipes created and cooked through the “cooking sessions” at the Sustainability Institute – Lynedoch / South Africa.

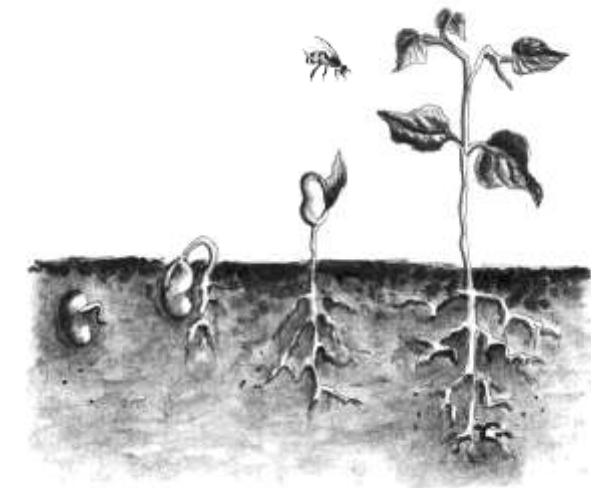
Using food as a vehicle for community building and also for a deeper reflection about the origins of what we eat, these sessions were held by the team from the Sustainability Institute.

The teams and themes were randomly selected. The teams were: African, Family and Local and the interpretation of these words were a team responsibility.

On February 18, 2014, I invited all the employees at the S.I. to attend a brief presentation and to share a meal, a symbol of my country - Brazil - which also somehow reflected a bit of Africa in the ingredients.

The Brazilian “Feijoada” is a dish that can be found throughout the Brazilian National territory. Its origin dates back to the era of colonialism when slaves brought from Africa were forced to cook meals from their “landlords” leftovers, often mixing the beans with less “noble” parts of the pig such as feet, ears, tail and even other types of meat (Carneiro, 2005).

Before this Feijoada however, all staff could attend a presentation where I pointed out key elements of the dish: its history, and the origin of each ingredient.

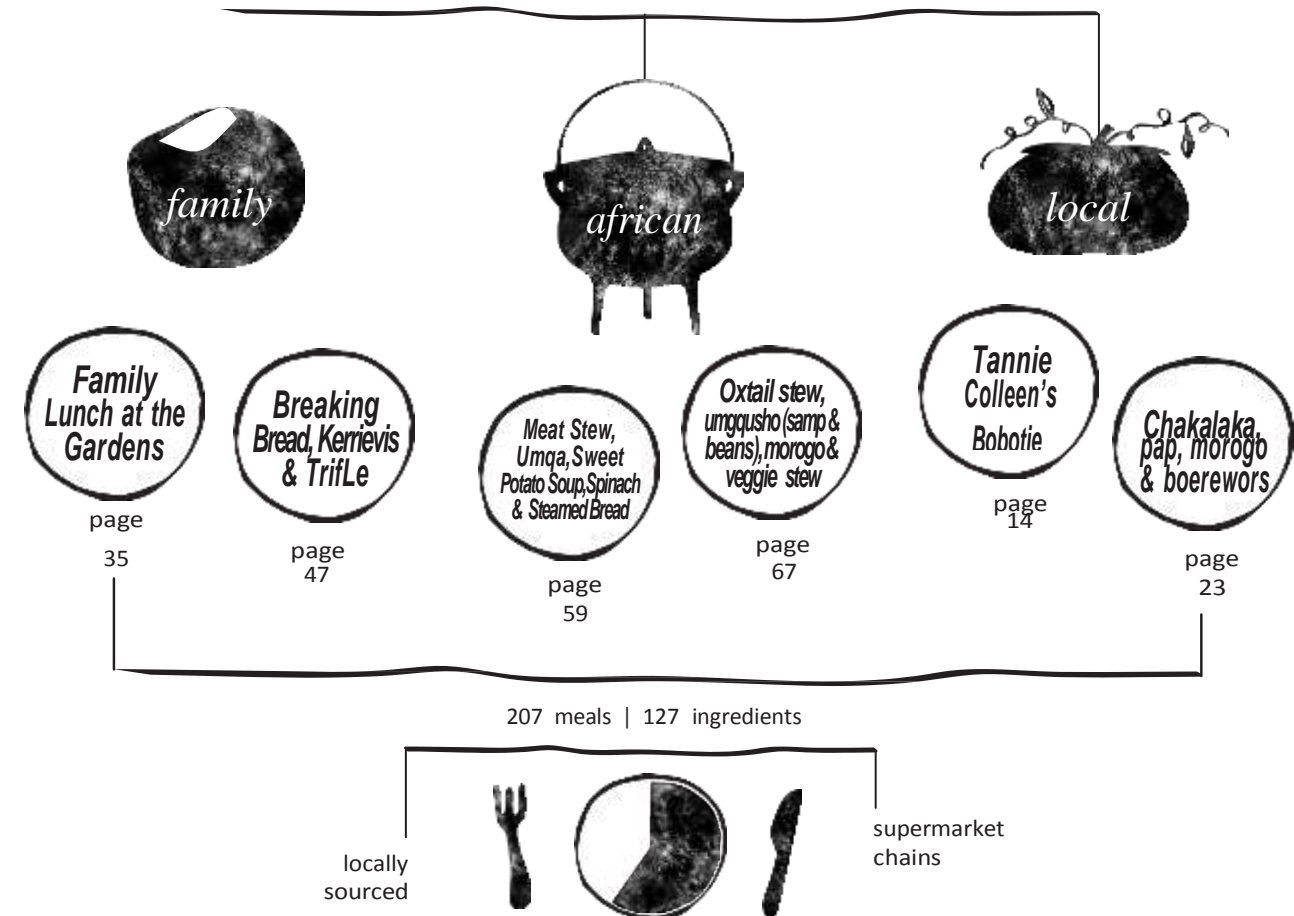






## Contents

The cooking sessions were central to the work of Participatory and Action Research (PAR) (Walter, 2002; Forrester, 2008; Barbera, 2008) and involved 65% of the employees of the SI, in other words, 24 of the 37 staff actively participated in the selection of recipes, search for suppliers for their ingredients, the preparation of the dishes to be served, as well as presenting to the gatherings of up to 64 people in a single lunch. In total, at least 207 meals were served over 6 thematic sessions which used at least 178 ingredients whose origin was divided primarily between large supermarket chains (64%) against (36%) of the items coming from local producers, Green Road and even the gardens from Lynedoch.



session 1

# Tannie Colleen's Bobotie



*"[...] I never thought it could work. The Bobotie is very good actually. It is almost unbelievable!" -Mabeba, 2014*

*"[...] I was thinking about "local" and then I remembered an amazing Bobotie that Tannie Colleen prepared a few weeks ago so we decided to use a local recipe. A recipe from Lynedoch!" -Bezuindehout, 2014*

To inaugurate the cooking sessions, the team composed by Louise Bezuindehout, Katli Mabeba, Litha Magida and Anlo Lintvelt prepared a meal.

The Bobotie is an interesting example of the richness and diversity of cuisine in South Africa. The emergence of the whole colonial world cuisine arose from the encounter between different cultures and ingredients. In many parts of the world, such as British India, Dutch Indonesia and French Algeria, fusion between galleys gave birth to hybrid dishes such as Scottish kedgeriee (salmon and rice), served with ratatouille and Algerian couscous and in South Africa, Cape Bobotie is a fine example of this. (McCann, 2009).

During the morning of this day, you could see a nervous team that rarely participated in any activity in the kitchen (Mabeba, 2014). Being the first team to hold a "cooking session", uncertainty about the outcome, generated an invisible pressure on participants who timidly tried to take their roles in simpler or more complex (Bezuidenhout, 2014) tasks. That day, it was not possible to use the kitchen at the Guest House, which was allocated to this task. The team, however, quickly regrouped and decided autonomously, to use the kitchen at the home of Louise Bezuidenhout. This simple act made me recall the resilience mainly present in complex systems - the phenomenon of "emergency" (Cilliers, 1998).

On March 7, 2014 at 13h00, employees of the S.I. began arriving to enjoy the meal provided. The team was proud of the result and the participants really enjoyed the "Bobotie". A vegetarian version was also prepared to meet the demands of those who did not eat ground beef.

Interestingly, at this very first cooking session, a competitive spirit among the participants was fired. There, comments among teams showed what was to come: *"[...] when it is our time get ready to join us for two days. We'll serve up a feast!" -Human, 2014.*

In total, 18 people ate the Bobotie on this first session.

And now the recipe used, coming from one of the residents of Lynedoch - Tannie Colleen.



|               |  |             |
|---------------|--|-------------|
| 9             | eggs                                       |             |
| 3 cups        | milk                                       |             |
| 3 cups        | cream                                      |             |
| 1,5kg         | mince (or lentils)                         |             |
| 6 slices      | bread soaked in milk                       |             |
| 450ml         | milk for the bread                         |             |
| 6             | medium onions                              |             |
| 6             | eggs                                       |             |
| 150ml         | Sweet Chilli Sauce/<br>Chutney/Apricot jam |             |
| 90ml          | Canola oil                                 | Pick 'n Pay |
| 3 Tbsp        | crushed ginger                             | Pick 'n Pay |
| 9 Tbsp        | garlic                                     | Pick 'n Pay |
| 30ml          | fennel                                     | Lynedoch    |
| 30ml          | Turmeric                                   | Pick 'n Pay |
| 30ml          | cumin                                      | Pick 'n Pay |
| 35ml          | curry powder                               | Woolworths  |
| 30ml          | salt                                       | Woolworths  |
| 7.5ml         | pepper                                     | Woolworths  |
| 90ml          | lemon juice                                | Woolworths  |
| 150g          | almond slivers                             | Woolworths  |
| 18            | Lemon leaves                               | Lynedoch    |
| 1/2 a handful | raisins                                    | Green Road  |
| 3 sticks      | cinnamon                                   | Pick 'n Pay |
| 1,5kg         | organic rice                               | Green Road  |
| 15ml          | borrie                                     | Pick 'n Pay |

*where did it come from?*

Green Road  
Green Road  
Pick 'n Pay

**Pre-heat the oven to 180°C.**

### BOBOTIE'S CUSTARD

**Lightly beat the eggs, milk and cream together in a bowl.**

### MINCE

**Heat oil in a large frying pan. Add the spices (be careful not to burn them), add the onions and fry until transparent. Mix the mince and the eggs and fry with the onions and stick of cinnamon. Add the lemon juice, raisins, sweet chilli sauce and bread, and braise. Transfer mixture to a baking dish. Pour custard on top and sprinkle with almonds. Make holes in the mixture and insert rolled up lemon leaves (original recipe uses bay leaves). Make sure to take out the stick of cinnamon before serving.**

### RICE

**Cook the rice with abundant water, which in general for organic rice means 1 part of rice for 2 parts of water. After the rice is cooked rinse water if necessary and season with borrie.**











session 2

## *Chakalaka with Pap & Morogo & Boerewors on the Side*



*"[...]not easy to cook for so many people. Let's see what happens. And you still owe us a Brazilian braai" -Claaser, 2014.*

*"[...]this is Xhosa food. Chakalaka." -Memela, 2014.*

The second cooking session was held on March 14, 2014 by a team comprised of: Shaun Claaser, Ivoritha Nortje, June Stone and Thembisile Memela. This team also worked the theme "local". This time, influenced by one of the members of the group from a Xhosa background, the group decided to prepare a meal using recipes from the Xhosa people, adding a common ingredient on South African tables, the sausage "boerewors" to cater to the taste of the "carnivores".

The Xhosa ethnic group, numerous in the Western Cape, Western Province in South Africa has a rich culture. The language, isiXhosa, is characterized by clicks made with the tongue during the pronunciation mainly for the letters "c", "x" and "q". Nelson Rolilahla Mandela, from Madiba clan (Maharaj, Kathrada and Nicol, 2014) is possibly the most illustrious Xhosa person in the world. He was the man responsible for the end of the shameful system of racial segregation that prevailed for decades in the country, known as Apartheid.

Besides the food offered by this group to the guests, they also did face painting and ate with their hands, as mandated by the Xhosa tradition (Memela, 2014). That surprised some of the group less accustomed to such a habit and somewhat comforted others who had used their hands to eat in other cultures of the world *"[...] interesting eating with your hands is to realize temperature, texture, consistency of food before it arrives at the mouth" -Metelerkamp, 2014.*

During lunch, Thembisile Memela sang a Xhosa song - "Qongqothwane" which honours a species of beetle that feeds on dung. The song alludes to "cleaning times" and emphasized the importance of the insect that clears what is "dirty" so that something new and clean may arise. A short sentence of the song is shown below (Babalwa, 2014):

*"Igqira lendlela nguqongqothwane  
Sebeqabele gqithapha bathi nguqongqothwane"*

The dishes in cooking session 2 were Chakalaka with pap and morogo, accompanied by boerewors. The venue for this lunch was the dining room in the Guest House, which accommodated almost the whole group sitting at tables and chairs but it ended up creating other spaces where people brought their dishes to eat in the absence of seats in the dining room. Before serving, each guest washed his hands in a basin with warm water and received a painting of white spots on the face. Each of the paintings was unique and specific to each of the 23 participants that showed up that day (including the team itself). Let's follow the recipes and methods of preparation.

The morogo, pronounced “moroho” is a generic term to define “wild leaves” now replaced with beet greens, beans, and various other possibilities (Sitole, 1999). This is an important ingredient in the traditional African diet which is rich in starch. In some regions, people tend not to use ingredients like these, as they believe somehow that they are inferior to the Western diet. Some of the traditional names of these plants are lerotho (*Cleome gynandra*) and dinawa (*Vigna unguiculata*) (van der Walt, Loots, Ibrahim and Bezuidenhout, 2009).

For the preparation of our recipe however, a sort of Swiss-Chard, another plant species with dark green leaves, was found more easily. Although the ingredients have been modified, the form of preparation remains the same and the name of the dish too - morogo.



## Chakalaka, pap, morogo & boerewors

for 20



*where did it  
come from?*  
Pick 'n Pay

**PAP**  
2.5kg maize meal

**PAP**  
Dilute 2.5kg of maize meal in water, then add to a pan of boiling water, mix to avoid lumps.

**CHAKALAKA**  
3 color peppers  
1 bunch carrots  
4 onions  
1 can tomato puree  
1 tsp perivale  
1 tsp curry  
3 Tbsp vegetable oil  
3 cans beans

Woolworths  
Green Road  
Green Road  
Pick 'n Pay  
Pick 'n Pay  
Pick 'n Pay  
Pick 'n Pay  
Woolworths

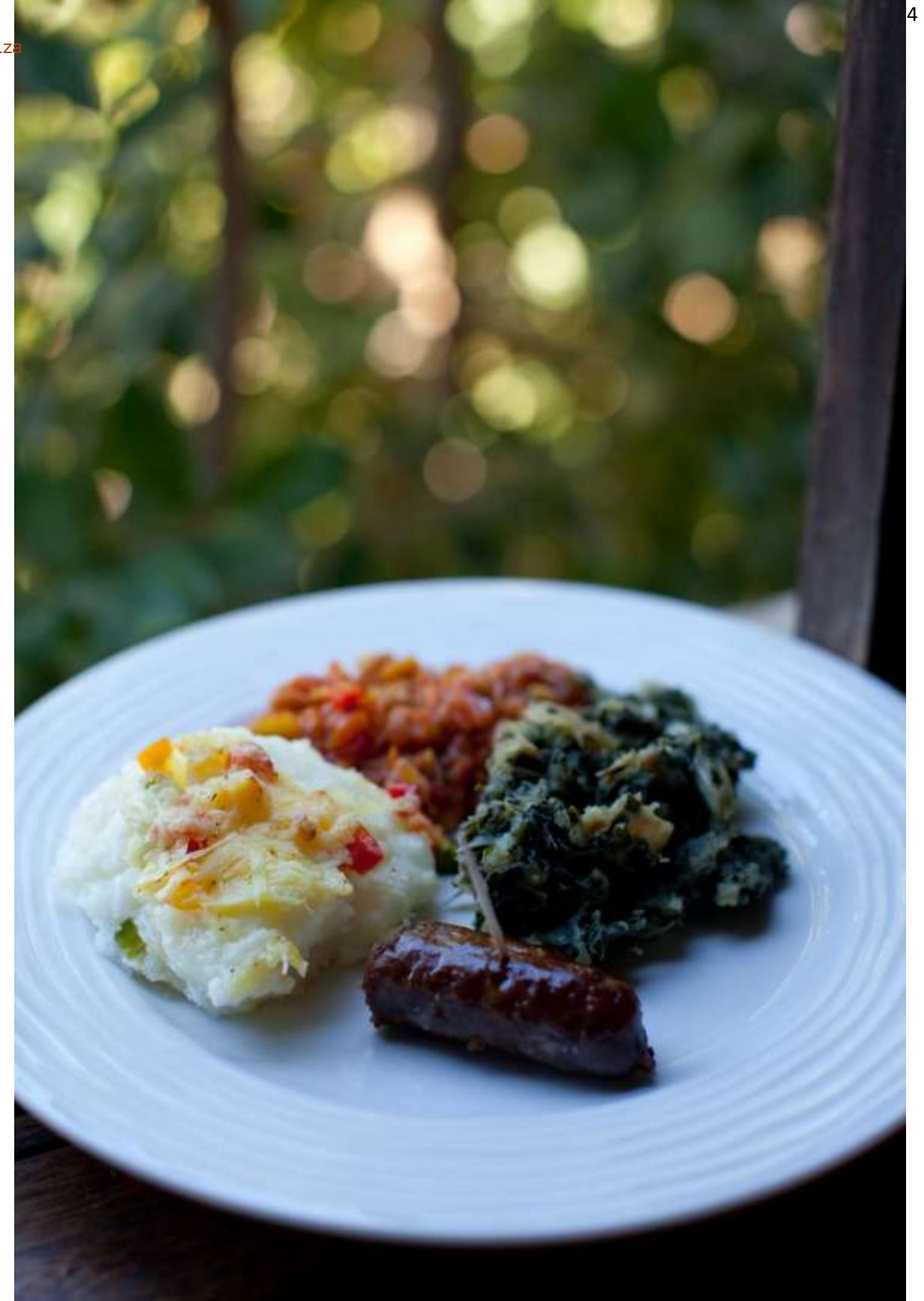
**CHAKALAKA**  
Heat the oil in a saucepan, add chopped onions, chopped bell peppers, tomato puree, curry, chopped carrots, and the peri peri pepper, let it cook for a couple of minutes, then add the canned beans and mix.

**MOROGO**  
Cook diced potatoes in a saucepan with water. In another pan, add the oil and then the spinach cut into thin strips, season with salt and pepper. Do not add water. Drain the excess water in the pan of potatoes and then add the cooked spinach. Mix forming a sort of puree and season with salt and pepper to taste.

**BOEREWORS**  
Traditionally cooked on a grill, this time the group decided to put these typical South African sausages in the oven, where they stayed until they were cooked.

**MOROGO**  
3 Tbsp vegetable oil  
1kg potatoes  
12 bunches spinach  
400g cheese (Camphill)  
water  
salt and pepper  
Pick 'n Pay  
Woolworths

1kg boerewors



*Boerewors: The literal translation of the name comes from the word “Boer” (farmer) and “Wors” (sausage), South Africa has special regulations for this type of sausage that must be composed of at least 90% meat always containing beef and pork and/or lamb, with the other 10% spice mixes and other ingredients. No more than 30% of the meat may be fat (<http://www.capetown.gov.za/en/>, 1990).*









session 3

## Family Lunch at the Gardens



*“Rather than discussing about what Family meals are, we decided to make a Family meal experience.” (Metelerkamp, 2014)*

*“It is a beautiful day, the skies are blue and this is an amazing idea.” (Ward, 2014)*

On April 4, 2014, the team number 1 composed of: Luke Metelerkamp, Eve Annecke, Terence Ward and Tracy Ward (who switched places with Ranen Swilling) interpreted the theme family that was drafted by them in a very simple and beautiful form. For them, a family lunch at the gardens at the S.I. should be fairly informal, enjoyable and affordable food, having the simplest tastes whilst bringing a greater sense of family.

Because of this, they asked the other members of the SI to invite their own families to be at this lunch. The result of the invitation could be seen in the huge communal table placed next to the garden, and several people sitting on the grass in a relaxed atmosphere of celebration. In total, 64 people attended, this being the greatest of all cooking sessions, in terms of the number of people present.

The site chosen to serve this lunch was the garden of Lynedoch. *“With some produce from the garden itself, it might not be possible to have a more local experience than this” -Metelerkamp, 2014.* The food served on this day was: Eve’s Green Salad, Roasted Vegetables, Organic meat patties and Luke’s bread.



**GREEN SALAD**

5 lettuce  
2kg tomatoes  
250g olives  
400g feta cheese  
150ml olive oil  
pinch salt  
pinch pepper

*where did it  
come from?*

EricSwart'sfarm  
EricSwart'sfarm  
Green Road  
Green Road  
Woolworths  
Woolworths  
Woolworths

**GREEN SALAD**

Cut the tomatoes into slices, tear the lettuce leaves into smaller pieces with your hands, chop the feta cheese into small cubes. Gently mix the lettuce and tomato in a large bowl, adding salt, pepper and olive oil. Then add the diced feta cheese and olives, stirring gently to incorporate ingredients.

**ROASTED VEGGIES**

2kg sweet potatoes  
4 brinjals  
10 onions  
100ml olive oil  
pinch salt  
pinch pepper  
100g chives

EricSwart'sfarm  
Lynedoch  
Green Road  
Woolworths  
Woolworths  
Woolworths  
Green Road

**ROASTED VEGGIES**

Cut all the vegetables into medium sized pieces. Combine in a bowl, the chopped vegetables, olive oil, salt, pepper and chives. Stir in order to coat all vegetable pieces with oil and seasonings. Transfer to a baking dish and place in oven for about 45 minutes.

**MEAT PATIES AND BOEREWORS**

5kg meat patties  
1kg boerewors

Spier Farm  
Woolworths

**MEAT PATIES & BOEREWORS**

Grill meat patties and boerewors on a barbecue. When grilling any type of meat, it is important to perform the process commonly called "sealing", which literally means sear all sides of the meat as the first step of the cooking process. This will prevent the liquid evaporating which would leave the meat tough and dry.

**LUKE'S BREAD**

2.5kg flour  
2 tsps honey  
100g yeast  
8 cups water  
15g rosemary  
pinch salt

*where did it  
come from?*

Eureka Mills  
Lynedoch  
Luke's friend  
  
Lynedoch  
Woolworths

Pre-heat the oven to 180°C.

**LUKE'S BREAD**

Luke brought a bread recipe to be made that was relatively simple and ideal with soups, meats and also as part of a picnic in the garden.

Add all dry ingredients in a bowl. With your hands, mix the ingredients and make a hole in the center of the mixture as if you were building a small volcano. In the hole, add water slowly. Avoid using cold water, as it delays the effect of the yeast. Lukewarm water is a better option. Mix with your hands from the center, incorporating every time, a little of the dry mixture at the edges. Add the honey and then the rosemary leaves. Mix the dough using your hands, until it becomes elastic and finally is less sticky. If necessary, add more flour. Leave the dough in a warm place, covered with a cloth so that fermentation can occur causing the dough to double in size (which, in this case, can take at least 1 hour). When the dough has doubled in size, make a ball and place on a baking dish. Bake for about one hour.



*Meat patties are portions of seasoned mincemeat and placed in a small format discs. What other countries might call a "Burger".*













session 4

## Breaking Bread, Kerrievis & Trifle



*"[...] during Easter time the whole coloured community will be eating Kerrievis. But this is the rst time of my life where I will actually prepare it!" -Human, 2014*

*"[...] our team will not offer a meal. We will offer a whole experience around food!" -Klink, 2014*

On April 11, 2014, the provocation launched by Rene Human for this group session (Human, 2014), finally came true. Team 6, composed of Mathilda Davis, Tania Klink, Rene Human and Ranen Swilling (who switched places with Tracy Ward on the team that held the family lunch in the garden) wanted to surprise the staff of the SI with a feast, and thought of every detail.

From the chosen location, the balcony of the Guest House, decorated with flowers and a huge conference table, to the choice of menu that brought to light the cultural traditions of the colored community and an opening prayer in Hebrew, following the tradition of "breaking bread" in an important time of the calendar - this was a true Easter Feast.

To share this meal, 31 people at least were served. I say at least because I could see many plates being carried out of the Guest House, taking food to others.

Below, I describe the steps that composed this menu as well as the history associated with each dish.

### BREAKING BREAD

Ranen Swilling recalls a Jewish millennial tradition to grab a piece of bread with the hands and cite a brief prayer in Hebrew (Ranen Swilling, 2014):

*"Baruch ata Adonai Melech Eloheinu ha'olam, Hamotzi lechem, min ha-aretz.  
Blessed are You, our God, Who has brought forth bread from the earth. "*

With this prayer, the simplicity of bread is brought out and at the same time contextualizes the origin of food. The Earth. A similar tradition can be found in Japanese families. Before you begin a meal, people would say aloud "oitadakimassu". The literal translation of the word "will eat" leaves another feeling of how to pronounce it. They say "thank you" to all the necessary chains that produce what will be consumed. From the life cycle of plants, going through the farmer, passing by those who sold the food and ultimately the person who prepared it. My name has Japanese origins and my father taught me this tradition more than 30 years ago (Shimahara, 1982).

The simple act of stopping before eating, to look at the meal and reflect with gratitude on the entire cycle required for this food, seems to be something that goes in the opposite direction of what we see today, in a world where the convenience and speed of preparation are often the most desired features when it comes to food (Tam, 2008).



**Breaking  
Bread, Kerrievis  
& Trifle**  
for 30



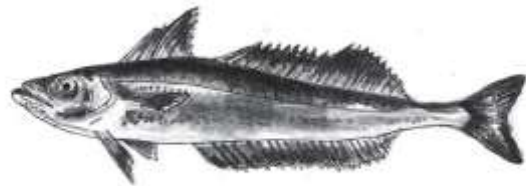
**BREAD**  
2.5kg flour  
100g tomatoes  
8 cups yeast  
400g water  
pinch sugar  
pinch salt

*where did it  
come from?*

Pick n Pay  
Woolworths  
Pick n Pay  
Woolworths

**PASTA**  
1kg pasta  
water  
1 Tbsp salt  
100g butter

PicknPay  
PicknPay  
PicknPay



Pre-heat the oven to 200°C.

**BREAD**

Mix well all dry ingredients into a large bowl. Make a hole in the middle of the mixture and slowly pour the warm water and start mixing in circles from there, incorporating the flour. The dough should be elastic and not too sticky to the touch. Through working with the hands, the temperature of this mass will be changing, improving conditions for the fermentation process to happen (Casagrande Kaisermann, 2009). Form the dough into a ball and let it rest covered with a cloth in a warm place. The dough should double in size, a process that can take one to two hours.

The bread must then be baked for about 45 minutes to 1 hour.

**PASTA**

Bring a pot full of water to boil, more than enough to cover all the pasta. Put the pasta into the boiling water, add a pinch of salt. Timing will depend on the kind of pasta that you are using. Usually 10 minutes is more than enough to cook the pasta so that it is still firm but cooked. Drain the water, add the butter and mix gently so the butter will melt and add flavor to the pasta.

**KERRIEVIS (CURRIED FISH)**

“Cape Coloureds”, are a diverse cultural group in South Africa, with ancestry from the Khoisan and Xhosa peoples, together with European settlers as well as slaves bought from Malaysia, Indonesia, Madagascar and Mozambique. The predominant language is Afrikaans. They have always had a strong fishing community, and still do to this day. Traditionally the men fish and the women process the fish. A traditional menu for the Easter season in this community is Kerrievis. Pickled fish seasoned with spices, served cold (Norton, 2013).

|       | <b>KERRIEVIS</b> | <i>where did it<br/>come from?</i> |
|-------|------------------|------------------------------------|
| 5kg   | hake fish        | Fish Monger                        |
| 1.5kg | flour            | Pick n Pay                         |
| 100ml | custard powder   | Pick n Pay                         |
| 20ml  | salt             | Pick n Pay                         |
| pinch | white pepper     | Pick n Pay                         |
| 9     | eggs             | Pick n Pay                         |
| 500ml | vegetable oil    | PicknPay                           |

**CURRY SAUCE**

|          |                      |              |
|----------|----------------------|--------------|
| 8        | onions sliced        | Organic Zone |
| 40g      | crushed garlic       | Pick n Pay   |
| 40g      | fresh ginger, grated | Pick n Pay   |
| 60g      | coriander fine       | Organic Zone |
| 60g      | whole cumin seeds    | Pick n Pay   |
| 50g      | curry powder         | Organic Zone |
| 10g      | fine cinnamon        | Organic Zone |
| 80g      | masala powder        | Organic Zone |
| 20g      | chopped red chillies | Pick n Pay   |
| 40g      | turmeric             | Pick n Pay   |
| 40g      | salt                 | Pick n Pay   |
| 600g     | sugar                | Pick n Pay   |
| 120g     | apricot jam          | Pick n Pay   |
| 3l       | vinegar              | Pick n Pay   |
| 15       | leaves of lemon-bay  | PicknPay     |
| 500ml    | water                |              |
| 80ml     | lemon juice          | Organic Zone |
| 60g      | coriander leaves     | Pick n Pay   |
| handfull | dry peaches          | PicknPay     |

**KERRIEVIS**

The fish must be cut into large strips or cubes so that they can withstand the process of frying without falling apart. Heat oil in a pan of appropriate size. Batter the fish pieces in the flour, custard powder, salt and white pepper mixture and then immediately pass them through the beaten eggs. Fry the fish pieces in the hot oil and drain excess oil on paper towels.

**CURRY SAUCE**

Fry the onions and garlic together in a very thin layer of oil. Add the ginger, cumin seeds, cinnamon, coriander, chillies and turmeric and let it fry for a few minutes. Be very careful not to burn the spices otherwise the taste will be compromised. Add the rest of ingredients for the curry, except the dry peaches, and cook for about 3 minutes, stirring gently. Lower the temperature and let it simmer for about 20 minutes. Add the dry peaches.

Get a glass bowl and alternate layers of fish and curry. Be careful not to break the fish. Let it rest for at least 2 days in the fridge so the flavors can develop.

*“At this time of year, all homes in the colored community, this is the dish that will be on the table for several days. I always ate with my family but never had prepared it from scratch. It is more practical to buy at the supermarket” -Human, 2014.*











*This pudding evolved as a way invented to use the leftovers. Trifle will be found in celebratory tables during Christmas, Birthdays and joyful events in many South African homes (Human, 2014). The trifle recipes can be different around the world but they can be traced in literature since 200 years ago (Walker, 2001). For the occasion of this event, the team decided to prepare the sponge cake and then transform it into a trifle pudding.*



- |        |                      |                                |
|--------|----------------------|--------------------------------|
|        | <b>SPONGE CAKE</b>   | <i>where did it come from?</i> |
| 400g   | sugar                | PicknPay                       |
| 400g   | soft unsalted butter | PicknPay                       |
| 8      | eggs beaten          | PicknPay                       |
| 400g   | self raising flour   | PicknPay                       |
| 2 Tbsp | baking powder        | PicknPay                       |
| 4 Tbsp | milk                 | PicknPay                       |
|        | <b>TRIFLE</b>        |                                |
| 4      | canned fruit         | PicknPay                       |
| 100ml  | Old Brown Sherry     | PicknPay                       |
| 6      | canned caramel       | PicknPay                       |
| 2l     | heavy cream          | PicknPay                       |
| 6      | jelly sachets        | PicknPay                       |
| 400g   | custard powder       | PicknPay                       |
| 2l     | full cream milk      | PicknPay                       |
| 150g   | cherries             | PicknPay                       |



Pre-heat the oven to 190°C.

**SPONGE CAKE**  
Mix all ingredients together until they form a creamy, smooth texture. Pour the batter into previously greased baking pan. Bake the cake for about 20 minutes.

**TRIFLE**  
The day before serving, prepare the jelly by mixing the powder with equal quantities of cold and boiling water, usually for each sachet, 300ml + 300ml are needed. Put into the fridge to cool down. When ready, cut into cubes or small bite size portions.

Prepare the custard, stirring gently until it has the consistency of light cream (if you dip a spoon into the custard, it should coat the spoon). Set aside to cool down.

Beat the cream until stiff. Break the sponge cake into bite size pieces.

In a big glass bowl, you will work in layers. Start with the custard at the bottom of the bowl, layer the sponge cake pieces, sprinkle with Old Brown Sherry, and add a layer of jelly pieces. Open the cans of fruit and sprinkle a little bit of the juice on to the jelly. Add small portions of the caramel in dollops and fruit pieces. Start the layering process again with custard. Do as many layers as possible. Once finished, cover with cream and add a few cherries on top to decorate.



session 5

## *Meat Stew with Umqa, Sweet Potato Soup, Spinach & Steamed Bread*



*"[...] for us an African meal has two meanings. One is the meal itself. The other is about the way we eat. We eat together! -Swilling, 2014."*

*"When you cook with spices, very soon everybody is talking about the food. As soon as they smell it, they will be curious about it and start talking and making questions trying to anticipate how it is going to taste. -Yondela, 2014."*

*"[...] as a foreigner, the whole experience of cooking with this team was amazing. Sometimes I was listening to people speaking three different languages, this is how diverse this country is -Downey, 2014."*

Africa's culinary history began with ingredients that were sourced from hunting, gathering, agriculture and herding. Africa is now universally understood to be the place of humankind's origin but our knowledge of it's agricultural history of food is more limited than that of other world zones (McCann, 2009).

On the 16th day of May, 2014 the team number 4 was challenged to cook something with the theme Africa. The team, composed of Rosie Downey, Anton Otto, Mark Swilling and Chantelle Scott decided to ask for help from a friend to cook a traditional meal. Yondela Tyawa, lives in an informal settlement called Enkanini a few miles from the S.I. In order to suit the many different tastes of the team, the group decided to be inspired by local dishes, while seeking a variety of options (Swilling, 2014). Yondela cooks as if acting on instinct. His talent is clear to the extent that he will grab ingredients and throw them into the pan with seemingly no care at all about the amounts of each. For me it was a challenge to monitor so many things happening and at the same time maintaining close contact with Yondela and his pans. Leave the kitchen for a moment and there was Yondela adding new ingredients that were not listed before.

To serve 34 people, 4 dishes were prepared and served in the lounge of the Guest House, where a large table in the "u" format was armed and the food placed in the center. Chairs were placed so that no one sat with his back to another.



|                        | <i>where did it come from?</i> |
|------------------------|--------------------------------|
| <b>UMQA</b>            |                                |
| 8 butternuts           | Green Road                     |
| 1.5kg maize meal       | Pick n Pay                     |
| 1kg maize meal - grits | Pick n Pay                     |
| 2 onions               | Green Road                     |
| 100ml vegetable oil    | PicknPay                       |
| water                  |                                |
| <b>MEAT STEW</b>       |                                |
| 5kg meat               | Spier Farm                     |
| 1kg carrots            | Green Road                     |
| 100g braai spices      | Atlas Spice                    |
| salt to taste          | Pick n Pay                     |
| 30g nutmeg             | Pick n Pay                     |
| 10 onions              | Green Road                     |
| 150ml vegetable oil    | Pick n Pay                     |
| 10 bayleaves           | Lynedoch                       |

#### UMQA

This recipe is a traditional Xhosa meal that will mix maize and butternut. Mince the onion and place in a pan with the vegetable oil, cut butternut into cubes and add to the pan, stirring gently for a few minutes. Add enough boiling water to cover the butternut. Cook for a few minutes until soft. Add maize meal gradually, stirring gently, then add the maize meal grits. Add more boiling water if necessary. Mix the ingredients thoroughly to combine. The mixture should form a stiff consistency but the maize meal and butternut should be soft.

#### MEAT STEW

To satisfy the most carnivorous palate, the group decided to prepare a beef stew. For this, they used meat from Spier biodynamic farm, located about 1.5km from the S.I.

Cut the onions into quarters, and brown them in a pan with vegetable oil over high heat. Add the diced meat, stir vigorously for a few minutes. Cover with water and boil on high heat. When meat is tender, turn heat down and add the chopped carrots. Season with braai spices, nutmeg and a few bay leaves.

|                         | <i>where did it come from?</i> |
|-------------------------|--------------------------------|
| <b>SWEETPOTATO SOUP</b> |                                |
| 8kg sweet potatoes      | Green Road                     |
| 1l heavy cream          | Pick n Pay                     |
| 300ml milk              | Pick n Pay                     |
| 50g braai spices        | Atlas Spice                    |
| 4 onions                | Green Road                     |
| salt to taste           | PicknPay                       |
| water                   |                                |
| 50ml vegetable oil      | PicknPay                       |

#### SPINACH & TURNIPS

|                    |            |
|--------------------|------------|
| 5 bunches spinach  | Green Road |
| 500g turnips       | Pick n Pay |
| 2 onions           | Pick n Pay |
| salt               | Green Road |
| 10g braai spices   | PicknPay   |
| 50ml vegetable oil |            |

#### STEAMED BREAD

|                    |          |
|--------------------|----------|
| 1kg flour          | PicknPay |
| 20g salt           | PicknPay |
| 20g sugar          | PicknPay |
| 50g yeast          | PicknPay |
| 50ml vegetable oil | PicknPay |
| water              |          |

#### SWEET POTATO SOUP

Heat oil in a pan, add finely chopped onions, stir for a few minutes. Add sweet potatoes cut into small pieces, cover with water and boil until the potatoes are very tender. Blend mixture until it becomes smooth. Put back over low heat. Add cream and milk taking care to maintain a creamy consistency. Add the braai spices and salt. If necessary add more milk.

#### SPINACH WITH TURNIPS

Boil a pot of water, add chopped turnips and cook for a few minutes until they become soft. Heat oil in a pan, add the onions stirring for a few minutes. Add the chopped and drained spinach followed by the cooked turnips. Season with salt and braai spices and cook until all ingredients are tender.

#### STEAMED BREAD

Mix the dry ingredients making a hole in the center of the mixture. Add water gradually and mix to the center slowly incorporating all dry ingredients to form a smooth dough. Leave in a covered bowl in a warm place so the yeast can go into action making the dough double in size.

The interesting part of this recipe is how the bread is cooked. Yondela washed a plastic bag and greased it with vegetable oil. The dough is then placed inside this bag. The bag is placed in turn in a pot of water and a holder, some sort of support, to hold the bag above the water level. The boiler will go to the fire for about 2 hours, covered. The steam generated by the boiling water cooks the bread.







session 6

## *Oxtail Stew with Umngqusho (Samp & Beans), Morogo & Veggie Stew*



For our last cooking session on May 23, 2014, the team composed of Alvonna Hopley, Bryce Anderson, Olivia Erasmus and Manda Mabeba had Africa as a theme and used every opportunity to dive into aspects of the African culture. The group enlisted the help of members of other teams who were voluntarily spread around the kitchen and the gardens next to the Guest House, where a huge potjie pot was used to cook the oxtail. They even made a short trip to a neighbor community where a delicacy of the Xhosa and Zulu cultures was found - the Umqombothi beer made from malted maize, sorghum malt, yeast and water (Odhav and Naicker, 2002).

Potjiekos has been part of South African culture for centuries. In fact, since the first settlers, these iron pots have been hanging over fires, until the present day where pots are used as well as pans, placed directly over the fire and allowing good honest food to be prepared (Smit and Heerden, 2000).





|                     | <i>where did it come from?</i> |
|---------------------|--------------------------------|
| <b>OXTAIL</b>       |                                |
| 7kg oxtail          | Farmer Angus                   |
| water               |                                |
| salt to taste       | Pick n Pay                     |
| 10 cloves garlic    | Pick n Pay                     |
| 1kg tomatoes        | Green Road                     |
| 50g curry           | Pick n Pay                     |
| 20g turmeric        | Pick n Pay                     |
| 250g kohlrabi       | Green Road                     |
| 2 sprigs rosemary   | Lynedoch                       |
| 2kg potatoes        | EricSwart'sfarm                |
| 100ml vegetable oil | PicknPay                       |

#### UMNGQUSHO (SAMP & BEANS)

|                          |             |
|--------------------------|-------------|
| 3kg speckled sugar beans | PicknPay    |
| 3l samp mielies          | PicknPay    |
| 12l 1 water              |             |
| tsp black pepper         | Pick n Pay  |
| 10 onions                | Pick n Pay  |
| 50ml vegetable oil       | Pick n Pay  |
| 80g curry powder         | Pick n Pay  |
| 80g chicken spice        | Atlas Spice |
| salt to taste            | PicknPay    |

#### OXTAIL

Cut tomatoes into pieces and put them in a pot on the fire, cooking slowly to form a sauce. Place the vegetable oil in a potjie pot, heating directly over the fire, then add the oxtail pieces. Stir for a few minutes, add water to cover the meat, add a pinch of salt. Add the cloves of coarsely chopped garlic, curry and turmeric. When cooking a potjie the trick is to mix from the sides, rather than making circles with the spoon, simply enter the side of the mixture and gently lift it from the bottom. Thus, the ingredients remain intact, otherwise the result will be a kind of mash since the ingredients are very soft (Otto, 2014). When the meat is tender, add the potatoes, kohlrabi and then the tomato sauce you made at the beginning.

#### UMNGQUSHO (SAMP & BEANS)

Soak beans overnight. Mix beans and samp, add to the pot and cover with water. Boil without salt until tender. Add water if needed to cook longer. Add salt to taste. Fry the onions in the vegetable oil in another pan, add curry and chicken spice for a few minutes, until onions are transparent. Add this mix to the samp and beans, mix gently and keep cooking until soft and mushy.

|                             | <i>where did it come from?</i> |
|-----------------------------|--------------------------------|
| <b>MOROGO</b>               |                                |
| 1 bunch bunch spring onions | Green Road                     |
| 2kg potatoes                | Green Road                     |
| 500g onions                 | Green Road                     |
| 50g raja spices             | Pick n Pay                     |
| 200g butter                 | Pick n Pay                     |
| 5 bunches spinach           | Green Road                     |
| salt                        | Pick n Pay                     |
| 50ml vegetable oil          | PicknPay                       |
| water                       |                                |

#### VEGGIE STEW

|                     |            |
|---------------------|------------|
| 4 leeks             | Green Road |
| 2 butternuts        | Green Road |
| 400g carrots        | Green Road |
| 2 cloves garlic     | Green Road |
| 5 sweet potatoes    | Green Road |
| green peppers       | Green Road |
| 5 onions            | Green Road |
| mixed herbs         | Green Road |
| 100ml vegetable oil | PicknPay   |

#### MOROGO

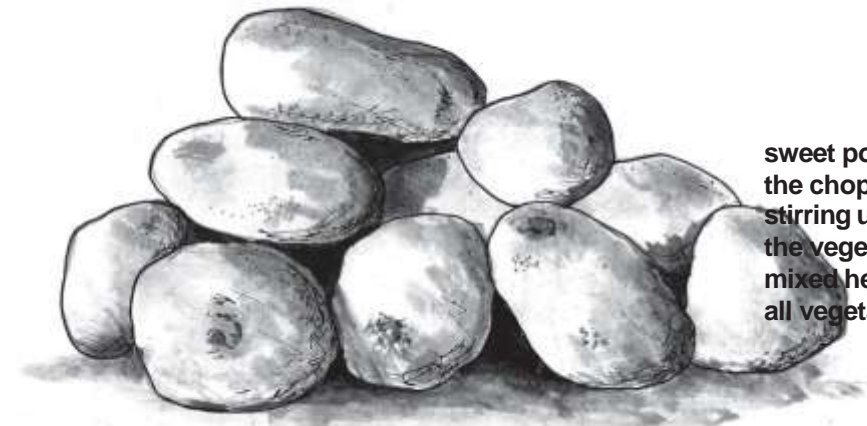
Another team that uses this dish, where recipes vary slightly, leaving an impression that every family makes morogo according to the ingredients they have.

In a deep pan, boil water and cook the potatoes chopped into small pieces. When they are soft, drain the excess water and add the spinach cut into thin strips as well as the chives and chopped onions. Season with salt and raja spices. Cook, mixing occasionally until the potatoes are falling apart and the other vegetables are tender.

#### VEGGIE STEW

To cater to vegetarians of the S.I. team, this cooking team prepared a simple and tasty baked vegetable dish.

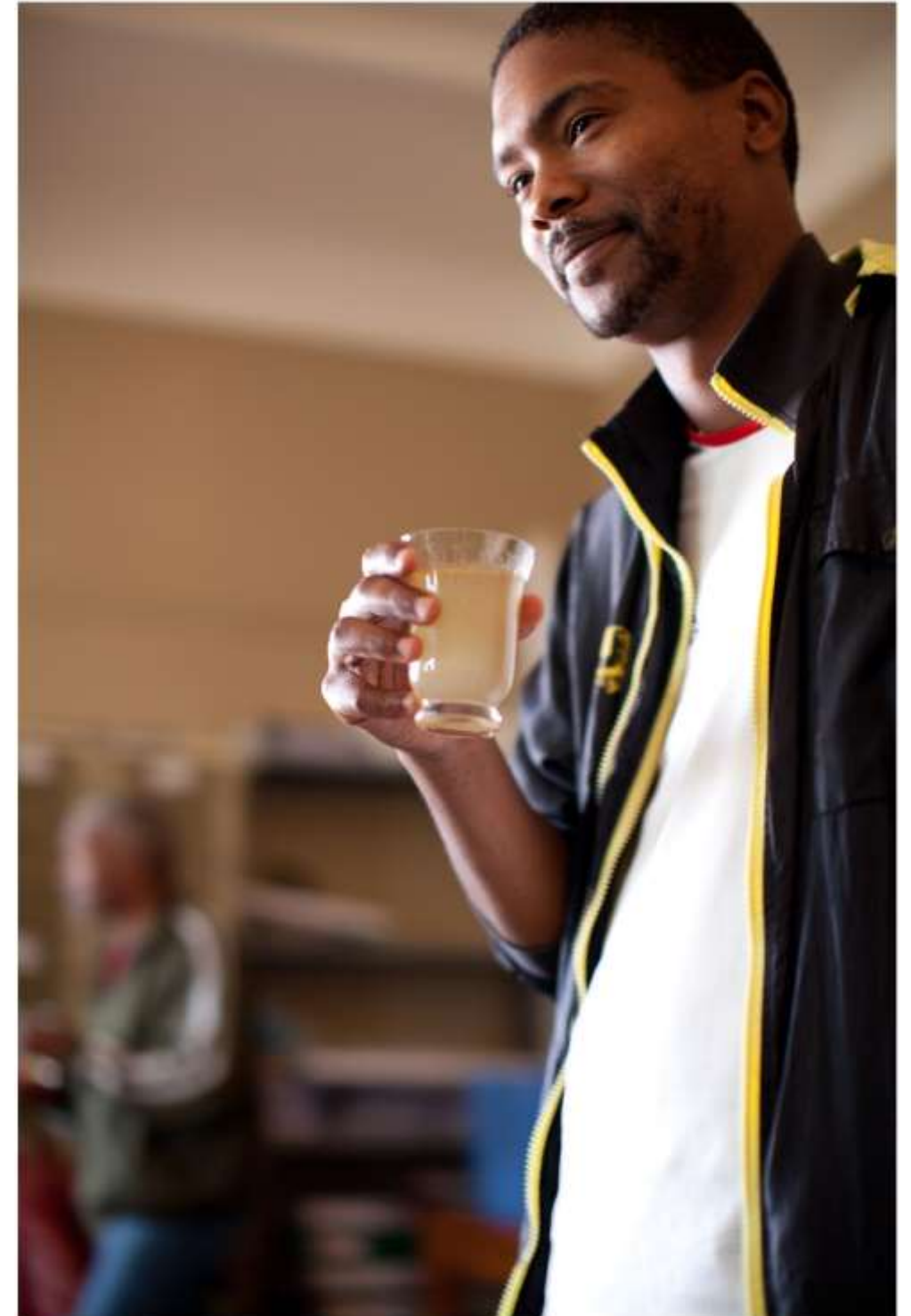
In a pan, add oil, chopped garlic, onion and leeks. Mix for a few minutes until the onions are transparent. Add the chopped carrots, peppers,



sweet potato. In another pan, add a little oil and the chopped tomatoes, cook over medium heat, stirring until it forms a sauce. Add this sauce to the vegetables you are cooking. Season with mixed herbs and salt and continue cooking until all vegetables are tender.









Besides the food, the group also decided to offer three traditional drinks. The beer made from sorghum and maize - Umqombothi, as described at the beginning and two other drinks. One of them, called Mageu, common in many cultures of South Africa where its name changes according to ethnic group. Mageu is the name given to a Sotho or Shona drink made essentially of water and mielie meal left to ferment, the Xhosa name is amaRhewu, the Zulu name is Amahewu (Steinkraus, 2004). Traditionally, this drink was always offered to hungry travelers within the homes of the community families.

The traditional Mageu recipe came from one of the group members, Manda Mabeba (2014):

#### MAGEU

**Make thin porridge, cool it and prepare 1 tablespoon of flour to 5 liters porridge. When it is lukewarm add flour, close the lid and leave to ferment for two to three days. When ready you can add sugar and serve it.**

#### GINGER BEER

50g ground ginger

2.5kg sugar

24g tartaric acid

24g bicarbonate of soda

*where did it  
come from?*

PicknPay

PicknPay

PicknPay

PicknPay

#### GINGER BEER

**Boil sugar and ginger to a smooth syrup, pour cold water, about 10 litres, in a bucket, add the sugar, tartaric acid and bicarbonate of soda and stir well. If you can, add pineapple peels. You can also add a handful of raisins. Close bucket tightly and leave for 3 days. After 3 days, bottle, refrigerate and serve cold.**





As I travel around this planet I meet people that tell me that there's a disconnect between humans and nature. This is obvious and the results can be seen all around the globe. But, at the same time, I think we underestimate the power of food to reconnect humans and nature and humans to humans. The role of food in "sustainable development" is also apparently underestimated and this book is not only a book. It is a statement.

We cannot even start the conversation about a future world if we do not bring food to the center of the table. I do believe that the connection to nature starts by connecting ourselves to our food. Where does it come from? Can you shake the hand of your farmer? What methods is he using? Why? Simple and powerful questions.

When I look at a strawberry seed I see something else besides the seed. I see a magical, sacred and powerful element capable of transforming water, sun and minerals into something beautiful. During this process, the strawberry plant will feed bees, other insects and microorganisms and the strawberries will feed other animals, including humans. When the plant dies, there's no pollution left and its body will feed the cycle again. Food is the revolution.

What I love about the power of this idea is the people that did believe in it and came together.

First, my wife Tatiana and my daughter Zoe. Thank you for believing and helping and dreaming.

The wonderful designer Theresa Wigley and amazing photographer Gwen Meyer. Everything changes when people like you add beauty and light to a very simple idea. Thank you.

My crazy supervisor Luke Metelerkamp that smiled when I first told him about this Master Thesis.

The Sustainability Institute founders Mark Swilling and Eve Anneck that kindly offered the S.I. and it's people as a fertile land where this project could flourish.

And the amazing cooking teams: Terence Ward, Ranen Swilling, Olivia Erasmus, Alvonna Hopley, Bryce Anderson, Manda Mabeba, Shaun Claaser, Ivoritha Nortje, June Stone, Thembisile Memela, Rosie Downey, Anton Otto, Chantelle Scott, Louise Bezuidenhout, Katli Mabeba, Litha Magida, Anlo Lintvelt, Tania Klink, Rene Human-Nefdt and Mathilda Davids.

The recipe? Find your passion inside yourself, believe in it, don't look for logic. Ask, and the whole universe will put the pieces of the puzzle right in front of you but, it is up to you and you only to put these pieces together.

*Eduardo Shimahara*





Published in December 2014

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