

AN ANALYSIS OF THE STATE OF GREEN BUSINESS IN THE SOUTH AFRICAN RETAIL SECTOR.

Theodora Anita Christelis

CHRTHE003

Research Report presented in partial fulfilment of the requirements for the degree of Master of Environmental Science

Department of Environmental and Geographical Science

The University of Cape Town

2013

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

CONTENTS PAGE	PAGE
ABSTRACT	6
1. INTRODUCTION	7
2. LITERATURE REVIEW	8
2.1 Environmental Issues and Climate Change	8
2.2 What is a Green Economy?	10
2.3 What is Green Business?	13
<i>2.3.1 Corporate Social Responsibility</i>	13
<i>2.3.2 Corporate Environmental Responsibility</i>	16
<i>2.3.3 Natural Capitalism</i>	17
<i>2.3.4 Sustainability</i>	18
2.4 Corporate and public responses to green efforts	20
2.5 South Africa's developing Green Economy	23
<i>2.5.1 Sustainable and green initiatives</i>	23
<i>2.5.2 Green Business Sectors in South Africa</i>	25
2.6 The Role of Green Retail in a Green Economy	27
<i>2.6.1 The Retail Sector in South Africa</i>	29
<i>2.6.2 Retail Business Process Components for Greening</i>	34
3. SUMMARY AND RESEARCH QUESTION	36
4. METHODOLOGY	36
4.1 Retail Selection	36
<i>4.1.1 Company Description</i>	37
4.2 Questionnaire Generation	38

4.3 Questionnaire distribution, collection, and supplementation	38
4.4 Analysis	39
5. RESULTS	40
5.1 The Level of Company Commitment to Sustainability in Green Business Processes	40
5.1.1 Procurement Policies	40
5.1.2 Distribution Network	41
5.1.3 Store Operations	42
5.1.4 Technology and Management	43
5.1.5 Marketing	43
5.1.6 The Credibility of Sustainability	44
5.1.7 Mechanisms of Sustainability	45
5.2 The Levels of Company Commitment to the Social Component of Sustainability	46
5.2.1 Human Resources Management	47
5.2.2 Consumer Education	48
5.2.3 Social-environmental practices	48
5.3 The Current State of Green Retail in South Africa	49
5.3.1 The Definitions of Green Retail	50
5.3.2 Sustainability Objectives	50
5.3.3 Drivers of Sustainability	50
5.3.4 JSE CDP Participation	51
5.3.5 Industry or Public Recognition of Practices, Green or Social Awards	52
5.3.6 The Adoption and Creation of Best Practice Frameworks	52
5.3.7 Environmental or Socio-Economic Principles	52
5.3.8 Management and Value Systems	53

5.3.9	<i>Current Sectoral Trends</i>	53
5.3.10	<i>The Influence of Green Trends</i>	53
5.3.11	<i>Future Trends in Green Retail</i>	54
6.	DISCUSSION	54
6.1	The Level of Company Commitment to Sustainability in Green Business Processes	55
6.1.1	<i>Procurement policies</i>	55
6.1.2	<i>Distribution Network</i>	55
6.1.3	<i>Technology and Management</i>	55
6.1.4	<i>Marketing</i>	56
6.1.5	<i>The Credibility of Sustainability</i>	56
6.2	The Level of Company Commitment to the Social Component of Sustainability	57
6.3	The Current State of Green Retail in South Africa	59
6.3.1	<i>The Definitions of Green Retail</i>	59
6.3.2	<i>Drivers of Sustainability</i>	59
6.3.3	<i>JSE CDP Participation</i>	60
6.3.4	<i>Industry or Public Recognition of Practices, Green or Social Awards</i>	60
6.3.5	<i>The Adoption and Creation of Best Practice Frameworks</i>	60
6.3.6	<i>Environmental or Socio-Economic Principles</i>	61
6.3.7	<i>Management and Value Systems</i>	61
6.3.8	<i>Current Sectoral Trends</i>	62
6.3.9	<i>The Influence of Green Trends</i>	62
6.3.10	<i>Future Trends in Green Retail</i>	62
6.3.11	<i>The value of Natural Capitalism</i>	64
6.4	Limitations	64
7.	CONCLUSION	65
8.	REFERENCES	69
9.	APPENDICES	83

LIST OF TABLES:

Table 1. Level of Company Commitment to Sustainability in Green Business Processes	41
Table 2. Level of Commitment to the Social Component of Sustainability	47

University of Cape Town

ABSTRACT

'Green' business is claimed by some South African retailers even though they lack well-founded and integrated sustainable, social, and environmental commitments. This is because no standards of greening exist for retail in South Africa. The purpose of this study is to explore, 'What constitutes green retail in the South African supermarket sector?' This required investigation into the sustainability of the companies' green business processes, social component of sustainability, and the existing state of the green retail sector. The five dominant supermarkets were selected to answer a questionnaire based on different environmental variables and principles. Interviewee responses were supplemented with publicly available company reports and these were then critiqued by allocating a level of commitment to sustainability of companies' green business processes, social considerations of sustainability, and establishing the current state of the green retail sector. Results show that within business processes, sustainable procurement is becoming increasingly accounted for through eco-labels and enterprise development programs. Distribution processes assist in verifying green claims and production. Various international and local sustainability programs are used to validate green efforts in the lack of national standards. Best practice frameworks are being utilised in the absence of local green standards and where limited, some are creating their own innovative solutions. Sustainability is a core focus at an executive level to some to ensure full integration of sustainability. Retailers may not necessarily pursue trends, but they have similar pressures that are often variably addressed. Although retailers' attempts to green their operations may not be standardised, the retail industry in South African has almost privatised sustainability and socio-economic development as they have superseded legislation to contribute to society and transform communities. It is an opportunity for retailers to take responsibility for their operations and in doing so create innovative solutions that address South Africa's environmental and social issues, in spite of the lack of green standards and governmental regulation, and in doing so become leadership companies that are accountable to their consumer base.

1. INTRODUCTION

'Green' business is a new concept of sustainable business in the South African economy that has been adopted voluntarily by businesses as an extension of the concept of a green economy. The transition of an unsustainable 'brown' economy to a sustainable 'green' one entails the foundations of the economy to be based on the importance of environmental, social and natural resources of capital. The 'green' economy concept does not replace sustainable development, but there is increasing recognition that sustainability is mostly dependent on the economy (UNEP, 2011). Past decades of generating wealth have been based on a 'brown' economy, a model excessively dependent on fossil fuels, resource depletion, and environmental degradation that has not substantially addressed issues of social marginalisation, environmental degradation and resource depletion (UNEP, 2011). A 'green' economy grows faster than a 'brown' economy over time, while maintaining and restoring natural capital (UNEP, 2011). South Africa's green economy is new and underdeveloped, so that the present 'greening' of the economy in South Africa is being defined by local business efforts. 'Green' business in South Africa is claimed by some companies for their efforts in one or more business processes, when overall well-founded green practices should constitute sustainable, social, and environmental business with a bottom line of multiple benefits. As South Africa is a developing country, it would seem necessary to ensure sustainable and responsible development that accounts for the environmental impacts of industry and the economy. For this reason, there are various local sectors that have initiated a transition to the formation of a green economy in order to ameliorate the state of the economy through improved environmental and social measures. One of these sectors is retail. Retail is a linking component between industry and consumerism and thereby has a valuable role in the relationship and feedback between industrial development and production, and consumption and consumer behaviour. For this reason, it has the potential for creating environmental responsibility within industry and consumerism. Supermarket retailers, specifically, have the highest patronage, since these are stores that are most frequented and therefore 'everyday' stores, and can thus be perceived to offer the most effective influence.

This potential for greening is difficult to actualize because there are no hard rules or guidelines for becoming green. Businesses work off of their own definitions of what "being green" means, while neglecting the fundamental and integrated social and environmental sustainability in business. Differences in definition and practice have created many discrepancies. This issue established the foundations of this study. How do retailers claim,

and validate, their business processes to be green, in addition to what they choose to encompass as green business in retail or how they choose to define its components?

As retailers attempt to address this question and transition to a green economy, there are various challenges and factors for consideration. Most of these are founded in the accounting of resource use and environmental impact in light of environmental and social issues, and climate change, in addition to the simultaneous challenges of creating green business in a 'greening' South African economy. Some of the challenges and factors that need to be discussed and considered are environmental issues and climate change, defining what it is to be a green economy or a green business, and understanding the role of retail in a green economy.

The purpose of this study is to answer the research question, 'What constitutes green retail in the South African supermarket sector?'. The aims and objectives are to 1) investigate the sustainability of the companies green business processes, 2) assess how much the social component of sustainability is incorporated into business processes, and 3) identify the existing state of the green retail sector.

2. LITERATURE REVIEW

2.1 Environmental Issues and Climate Change

Anthropogenic impacts on the environment are being increasingly noticed, as natural resources are diminishing, species of animals and plants are threatened or face extinction, weather patterns, climate, ecosystem conditions and habitats are changing, and the environmental quality of life is decreasing. Resources are deteriorating while the demand for them, the human population, is increasing at an unprecedented rate in history (Botkin and Keller, 2005). In 1960, 3 billion people walked the Earth, and in 2005 6.3 billion, with predictions of 10 billion before 2040 (Botkin and Keller, 2005). The Earth is finite in space and resources, and the human population is currently outgrowing its resource base, where all anthropogenic activity is interconnected and thus all sectors and systems of society are affected by such a future prospect.

Global warming and climate change is attributed to increasing carbon dioxide and global average temperatures, with other factors, threatening all resources of human systems (food security, health, socio-economic development, markets and economies), and natural system services (ecosystems, species and climate) as climate, natural disasters, and resources become highly variable and altered (Botkin and Keller, 2005; Parry *et al.*, 2007). Clean water and air, biodiversity and endemic plant and animal species, landscapes and habitats, natural services, energy, geochemical cycles and processes are not sustainably harvested or utilised at current rates of anthropogenic demand and consumption. Specifically, natural resources and services (e.g. natural geochemical cycling of carbon in forests) that are invaluable environmental systems cannot be replaced or substituted for, once present consumption exceeds future reserves and creates long-term or permanent consequences.

Old industrial convention and the design and use of many natural resources are being questioned and revised against the possibility of a new type of industrialism that differs from that of the Industrial Period in its objectives, philosophies, fundamentals, and processes (Hawken *et al.*, 1999). This new industrialism is based on natural capital. Natural capital is all natural resources used by humans (water, air, minerals, trees, soil, et cetera) as well as the living systems and services of such resources (i.e. ecosystems) (Hawken *et al.*, 1999). At present, natural capital is deteriorating and decreasing at an unprecedented rate, and as more people and businesses place increasing demands on living systems and resources, the limits to prosperity and sustainability become determined by natural capital over industrial force (Hawken *et al.*, 1999). Sustainability and corporate responsibility have thus become the most prevalent themes to have emerged in the last decade internationally, as they offer perspectives on ensuring provisions for future generations particularly with the rise of social, environmental, and economic inequality and adversity (Petrini and Pozzebon, 2009).

Consequently, companies worldwide have engaged in necessary efforts to integrate sustainability into business practices (Jones, 2003). Companies have an important role for efficiency and innovation in market economy and are capable of generating value from limited resources (Figge and Hahn, 2012). Furthermore, according to Bansal (2002), it is generally accepted that without corporate support, society will not be capable of environmental sustainability, as companies represent the productive resources of the economy. From this perspective, the green business case appears as the obvious response of private sector companies to environmental challenges and pressures.

In order to create environmentally sustainable solutions, the contributing factors need to be identified for effective intervention. The unprecedented human population growth rate of the twentieth century is considered the underlying environmental problem creating such demanding interactions, consumption, and use of environmental systems and resources (Botkin and Keller, 2005). Combined with impacts of technology, environmental impacts are multiplied, and in an increasingly urban world, focus needs to be placed on the environments of cities and on the effects of these cities on the surrounding environment.

In order to link climate change to green business solutions, Alcamo (2009) asks what emissions need to be reduced and from where. As world energy system refineries and power plants account for approximately 1.25 of every 5 tons of global greenhouse gas emissions- industry is accountable for 1 of 5 tons, and transport and building account for another 1 out of the 5 tons (Alcamo, 2009). Combined these sectors account for two-thirds of all emissions and these are the sectors where green business can impact climate change through renewable energy, low-carbon industries, energy-efficient buildings, low-carbon vehicles and the like (Alcamo, 2009). This relationship is considered real and specific in its capability of lowering climate change risks with every ton of emissions reduced (Alcamo, 2009).

2.2 What is a Green Economy?

With climate change, emission reduction, and environmental issues becoming a central focus of business plans, businesses around the world have been "going green". The concept of a "green economy" is not a replacement for sustainable development, but there is increasing recognition that achieving sustainability is dependent on the economy. Previous decades of creating wealth through a 'brown' economy model has not addressed issues of social marginalisation and resource depletion. Sustainability is still a long-term objective, but according to the UNEP (2011) greening the economy is a prerequisite of it. A transition to a green economy requires specific enabling conditions of the background of national regulations, policies, subsidies and incentives, and international market and legal infrastructure and trade and aid protocols (UNEP, 2011). At present however, enabling conditions are still based predominantly on a brown economy which depends on fossil fuel energy (UNEP, 2011).

The UNEP (2011) defines a green economy as one that creates improved human well-being and social equity, while reducing or minimising environmental risk and ecological impacts - a low carbon, resource-efficient and socially inclusive economy. Specifically, the components of a green economy should include the creation or investment in: the value, investment, and restoration of natural capital; poverty alleviation; job creation and social equity enhancement; the substitution of fossil fuels with renewable energy and low-carbon technologies; the promotion of enhanced resources and energy efficiency; and more sustainable urban living and low-carbon mobility. The UNEP specifically emphasises a green economy as a socially - centred approach and the elements thereof to address social equity, thereby emphasising the social importance and responsibility of 'green' that might often be neglected or overlooked (UNEP, 2011). Public and private investments that reduce emissions and pollution, optimise energy and resource efficiency and use, and prevent biodiversity and ecosystem service losses, should drive growth in income and employment. Public expenditure and consumerism, policy reform, and changes to regulation should drive these investments. Development should protect, enhance, and rehabilitate natural capital and value it as a vital economic asset and source of public benefit- particularly for marginal communities who are more dependent on climate and the environment (UNEP, 2011).

Green businesses create a green economy as there are many technologies, work and business processes, products and services within the different sectors (as specified above) that can reduce humanity's environmental impact and create a more sustainable economy. Achieving long-term sustainability of the environment requires greening the economy through green business practices (UNEP, 2011). It is important to note that many definitions of green business exist, but all are said to, at their common core, utilise suitable strategies for sustainable business to exploit win-win situations that reconcile environmental protection and financial services (Figge and Hahn, 2012). However, for purposes of this study green business is defined in line with UNEP principles, as business that supports the generation of a green economy and therefore founded on improving social well-being and equity while minimising environmental and ecological impacts through low-carbon, resource-efficient and socially inclusive measures.

Evidence shows that greening economies does not inhibit the generation of wealth and jobs, but offers opportunity, in most sectors, for investment and growth (UNEP, 2011). A green economy conceptually refers to improved human well-being and social equity, and the protection of future generations from environmental risks and scarcities (UNEP, 2011; Cai *et*

al., 2011). For this reason, many developed countries view it as an extremely effective solution to restore environmental prospects, employment and economic growth (Cai *et al.*, 2011). For example, Da Graça Carvalho *et al.* (2011) summarized numerous studies to find that the main elements of a post carbon society (i.e. renewable energy, energy storage and smart grids) in Europe would create a significant leap in global investment and create millions of new jobs. However, as mentioned previously, enabling conditions to promote the transition to a green economy need to be established, and this requires urgent action (UNEP, 2011). A green economy are assumed to be affordable only by wealthy or developed countries or an imposition of these countries to restrain developing countries, where in actual fact, successful examples of greening economies are found in the developing world (UNEP, 2011). Furthermore, there are a few initiatives underway that support a transition to a green economy. For example the World Wildlife Fund (WWF) has various programmes to innovate business and create cleaner economies- programmes that have specific objectives that are in line with environmental protection. The WWF Climate Savers Programme is an initiative to 'Let the Clean Economy Begin' by targeting predominantly carbon reduction solutions, in addition to the following: energy efficiency of products; energy efficiency in processes or facilities; energy-saving products; transport efficiency; fuel switching to natural gas or increased use of co-generation; conversion to renewable energy; develop and implement carbon analysis tools for business decisions (Dickie and Hiller, 2007). Greening an economy is therefore not seen as a limit to growth but instead a new engine of growth as a net generator of jobs and a strategy for poverty alleviation (UNEP, 2011).

The UNEP has developed a Green Economy Initiative that is currently underway, with a few successful examples of projects that are encouraging results of initiatives around the world (UNEP, 2010). The specific projects are: Renewable Energy in China; Feed-in tariffs in Kenya; Organic Agriculture in Uganda; Sustainable Urban Planning in Brazil; Rural Ecological Infrastructure in India; Forest Management in Nepal; Ecosystem Services in Ecuador; and Solar Energy in Tunisia (UNEP, 2010). Some of the examples are from developing countries and emerging economies and show benefits from green investments and policies that if, scaled up, are said to provide an alternative path of development that aids growth, employment, and poverty (UNEP, 2010).

Of the benefits of a green economy, some of those that pertain to the retail sector include: staying ahead of regulation through environmentally conscientious product and process

design (Burdick, 2010); and creating a competitive advantage as carbon and environmental footprints will continue to affect supply chains, thereby allowing for green products to have comparable or lower prices (Branker *et al.*, 2011). According to Guziana (2011) three main motivations exist: creating a competitive advantage as competition in these sectors intensifies- the environmental profile of a company will gain more importance and weighting; the environmental responsibility of activities as environmental impacts are expected to grow accordingly; and environmental leadership by obliging companies to engage with the environmental aspects of their activities and production processes.

2.3. What is Green Business?

Green business is an all-encompassing responsibility. It requires greening on all levels of management, product and process. Those of particular importance are corporate social responsibility, corporate environmental responsibility, the adoption of natural capitalism, and the end goal of sustainability.

2.3.1 Corporate Social Responsibility

In order for a green economy to exist, the corporate world needs to take responsibility for the greening of their companies. Corporate Social Responsibility (CSR) refers to the responsible behaviour of corporations within society by minimising their negative impacts and maximising their benefits (Berry and Rondinelli, 2000). However, there have been many contested definitions of the term (Gladwell, 2000). Although the actual components of CSR are essentially contested, there has been a recent turning point as the concept of CSR has become an integral part of organisations (Ciliberti *et al.*, 2009). Hamann (2003), for example, defines CSR as a phenomenon that goes beyond voluntary business initiatives and market drivers and is influenced by diverging conceptions of the function of business in sustainable development.

In spite of the numerous efforts to produce a clear and unbiased definition of CSR, there is still confusion as to how CSR should be defined. According to Dahlsrud (2008), however, analysis shows how existing definitions are congruent to a large degree and therefore the confusion is not so much about how CSR is defined, as to how CSR is socially constructed in a specific context. Furthermore, according to Marrewijk (2003), conclusions on the various

definitions of CSR show that based on historical perspectives, philosophical analyses, impact of changing contexts and situations and practical considerations, a "one solution fits all"-definition should be abandoned, and that various and more specific definitions that match the development, awareness and ambition levels of organisations, should be accepted. However, for purpose of this study, the following definition from the Commission of the European Communities (2001, p. 7) which is "the voluntary integration, by companies, of social and environmental concerns in their commercial operations and in their relationships with interested parties".

CSR is considered the dominant business framework for policy and strategy in minimising social and environmental risks and impacts (Dummett, 2008; Vogel, 2005). CSR activities are voluntary so that environmental efforts are often not verifiable (Das, 2006). In order to address this, companies carry out individual components or use a combination of selected initiatives and thereby neglect issues of transparent monitoring mechanisms (Das, 2006). Therefore the concern is that CSR, in spite of a large amount of initiatives, has no framework to cover issues of government standards, management systems, codes of conduct, performance standards and reporting, and assurance standards (Das, 2006). The business case for CSR and voluntary business initiatives should however, be inclusive in the extensive impacts of business on society, particularly in discourse and state policymaking (Hamann, 2003). Additionally, CSR should, in theory, regard private companies as development agents, particularly in the partnership with government and civil society groups (Hamann and Acutt, 2003). Partnerships with business can be beneficial to civil society groups, but positions within these partnerships should be maintained- namely 'critical cooperation' – in which government is said to be able to play an important role in facilitating effective partnerships (Hamann and Acutt, 2003).

Hamann (2009), argues that South Africa's history has implications for CSR whereby the apartheid era led to the abuse of human rights by businesses as well as it having given rise to voluntary initiatives to contribute to social development and governmental policy changes. The historical progression of CSR in the country has developed from the emphasis of corporate social investment, specifically philanthropic initiatives in health and education, to one of an integrated approach prioritising sustainable development and linked to collaborative governance initiatives and partnerships (Hamann, 2009). Furthermore, of the emerging market-based drivers, Black Economic Empowerment (BEE) policies form part of the key role played by government in CSR developments (Hamann, 2009). However,

government should also function to raise social standards in business practices, as legislative pressures are a primary cause for changes in company strategy and management though they may be complemented by market-driven incentives – particularly resultant of national governmental focus on extending economy access (Hamann, 2003). As the intervention of the state and the voluntarism of business are both linked to this, CSR may be defined and determined by the interplay of both of these (Hamann, 2003). Both business and new governance tools (e.g. multi-stakeholder negotiation) are capable of contributing to the development of an effective government that directs CSR for social and business sustainability (Hamann, 2003). Locally, CSR is based on a need to improve social engagement and local development, where the future potential of CSR lies in the collective negotiated support for stronger government (Hamann, 2003).

Furthermore, Hamann (2009) states that CSR within South Africa cannot be defined as easily as voluntary initiatives as in Europe, for example, and there are no set distinctions between voluntary business actions and interventions led by the state. Although CSR-related performance assessments and rankings have a role, they often use a superficial perspective on the interactions between companies and their socio-economic and natural environment (Hamann, 2009). For this reason, more context-specific assessments are needed to consider all components and dynamics of local sustainable development (Hamann, 2009). According to Fig (2005), CSR has been abandoned by most firms in South Africa, for the term Corporate Social Investment to detract attention from calls on business to redress the results of the apartheid systems contributions, past corporate behaviour, and mask any continuing inequalities and unsustainable practices. Business has been claimed to have responded weakly to pressures for CSR and voluntary initiatives have not succeeded, and BEE compliance and environmental standards have to be legislated and regulated (Fig, 2005). Unless companies re-evaluate their legacies with more honesty, CSR contributions may be regarded as cosmetic and self-serving (Fig, 2005).

Although environmental responsibility has high priority as a dimension of CSR, there are weaknesses with the management of environmental risks as emphasis is often placed on labour standards with environmental management receiving less attention (Vogel, 2005). The most serious weaknesses in CSR are seen in developing countries, as far fewer industry and company codes govern environmental practices than labour standards (Vogel, 2005). Despite how environmental problems may be more severe in developing countries, far fewer voluntary corporate programs exist for environmental protection and minimised

impacts (Vogel, 2005). Developed countries offer more extensive legislation which in turn determines environmental business practices (Vogel, 2005). Furthermore, CSR is perceived by some to be a form of 'green-washing' by corporate industries, as many companies that emphasise their responsible citizen credentials are often caught breaching their standards-particularly within their developing country operations (Bruno and Karliner, 2002; Beder, 1997).

According to Hamann and Kapelus (2004), at a practical level the key demand of CSR critics is that for CSR to be anything other than green-wash, it has to guarantee that companies are accountable for the direct and indirect impacts of their activities. Not many companies participate in this standard. There are however, a few leadership companies that view CSR as more than a collection of discrete practices or initiatives motivated by marketing, public relations or other business benefits (Das, 2006). Rather, their efforts are viewed as a comprehensive set of policies, practices and programs that have been fully- integrated into business operations, and decision-making processes that are supported by top management (Das, 2006).

2.3.2 Corporate Environmental Responsibility

Not only must corporations act in a socially responsible manner to accomplish a green business, they must also act in an environmentally responsible manner. Corporate Environmental Responsibility (CER) is a concept linking environmental and business ethics, whereby it is argued that CSR should be consistent with sustainable economics for sustainable development (DesJardins, 1998). CER should account for all environmental and ecological issues affected by business decisions so as to minimise negative impacts, in addition to it influencing business policy (DesJardins, 1998). The concept is aimed at addressing the limitations of business in environmental considerations, and the shortcomings of environmental science in business applications (DesJardins, 1998). This is considered particularly relevant as economics and environmental fields become more integrated. A significant percentage of the global population live below a minimal level of subsistence, with only a small portion of the population living in industrialised countries. In order for these groups to meet the living standard, significant economic activity is needed over the next few decades (DesJardins, 1998). Coupled with estimates of a doubling of the world's population in the next fifty years, securing provisions for the demands of future

populations necessitate the recognition that the only source for this economic activity will be natural resources (DesJardins, 1998).

The three standard factors of production (natural resources, capital, and labour) are all derivations of the planet's productive capacity so that raw materials, food, and energy are the fundamental elements of all economic activity (DesJardins, 1998). The three factors of global poverty (a rapidly increasing human population, limited resources, and a stressed and threatened environment) will require significant economic activity to accomplish alleviation, yet economic growth itself has led to the current state of such environmental deterioration (DesJardins, 1998). According to DesJardins (1998), responsible business activity of firms and industries are society's tools for achieving ethical and social goals in a market-driven economy (DesJardins, 1998).

The role of private sector is changing from being a contributor to environmental degradation, to one of increasingly becoming an active partner in environmental protection (Das, 2006). Many governments and businesses are acknowledging that economic growth and the protection of the environment and natural resources are not necessarily in conflict with one another (Das, 2006). The trend of proactive environmental management is becoming increasingly accelerated by pressure on companies by the government to ensure environmental quality (Berry and Rondinelli, 1998). Government regulations are more rigid and strict, legal liabilities for environmental degradation are becoming increasingly severe, and green consumer pressures are increasing (Berry and Rondinelli, 1998). Moreover, of the benefits of environmental responsibility in business decisions, there is increasing evidence of firms adopting proactive environmental strategies in order to become more efficient and competitive (Berry and Rondinelli, 1998).

2.3.3 Natural Capitalism

In spite of businesses being lethargic about social and environmental responsibility, many companies have taken corporate responsibility on board. This has brought about a new business driver called natural capitalism. Natural capitalism is a new type of industrialism, the fundamental assumptions of which are based on a different mind-set and values to conventional capitalism. In this model, the environment sustains and provides for the entire

economy so that the availability and functionality of natural capital (particularly life-supporting services) is the limiting factor to future economic development (Hawken *et al.*, 1999).

Poorly designed business systems, population growth, and wasteful consumption primarily cause the loss of natural capital and addressing these is necessary in order to create a sustainable economy (Hawken *et al.*, 1999). Future economic progress will rely on placing value on all forms of capital (human or social, manufactured, financial, and natural) and radical increases in resource productivity will create significant benefits (Hawken *et al.*, 1999). Improvements to quality and the flow of services will secure human welfare, and economic and environmental sustainability requires redressing global inequities of social income and material consumption (Hawken *et al.*, 1999).

Natural capitalism has several strategies that are applicable to retail: radical resource productivity; creating a service and flow economy (a shift in value from the acquisition of goods to one of quality and utility); and investing in natural capital (reinvestments in restoring, sustaining, and expanding natural capital resources). These all have the potential to generate multiple benefits and opportunities including the reduction of negative environmental impacts, the creation of economic growth, and alleviation of poverty through the creation of jobs (Hawken *et al.*, 1999). An approach of natural capitalism is seen as a necessary opportunity to radically use less resources, materials and energy and promote sustainability for the purposes of supporting economic efficiency, ecological conservation, and social equity (Hawken *et al.*, 1999).

2.3.4 Sustainability

An important aspect of Natural Capitalism is sustainability. Sustainability is a concept defined as a characteristic or state whereby the needs and requirements of the present and local population can be met without compromise to the ability of future generations or populations in other locations to meet their needs (UNEP, 2011). Sustainability is the management of natural resources and the environment with the objectives of allowing for resource use to remain at or above a level (carrying capacity) while the ecosystem retains its function and structure (Botkin and Keller, 2005). The sustainable development of a society is the ability to develop an economy and social institutions while maintaining its environment and resources indefinitely (Botkin and Keller, 2005). A sustainable economy is thus defined

as an economy that maintains its level of activities over time in spite of environmental resource use (Botkin and Keller, 2005).

Sustainability and the promotion of the concept of natural capital are emerging market-drivers that are becoming increasingly influential with major implications for corporate strategy in both the financial and energy sectors (Leggett, 1996). Effective environmental strategy, principles of natural capitalism, and sustainable business development practices will become more fundamental in core business processes as financial markets will become affected by climate change, limited resources, and a degradation of the environment and its living systems.

Focusing on long-term strategy and core principles of sustainability and natural capitalism has the potential to create multiple benefits, increased and optimised productivity and efficiency of resources, long-term security and provisions of these resources, and other co-beneficial environmental consequences and effects (Hawken *et al.*, 1999). Sustainability has principles applicable to many disciplines, as the principles are holistic and are aimed at including all components of a process or system when analysed. Sustainability has been found to be applicable in the structure of businesses and economies and has resulted in sustainability and CSR becoming the most prevalent themes to have emerged in the last decade internationally (Petrini and Pozzebon, 2009). Both offer long-term perspectives on requirements for ensuring provisions for needs without compromising those of future generations – particularly as social, environmental, and economic inequalities and adversities are increasing (Petrini and Pozzebon, 2009). Consequently, companies worldwide have engaged in necessary efforts to integrate sustainability into business practices (Jones, 2003). A sustainable company is thus defined as one that contributes to sustainable development through economic, social and environmental benefits simultaneously – the so-called "triple bottom line" (Elkington, 1998).

The evolution of sustainability includes the development of principles, certifications, and norms for global guidance and strategy (Petrini and Pozzebon, 2009). More prominent examples include the Millennium Development Goals and Agenda 21 (global pacts with socially responsible and sustainable business directed actions) (Petrini and Pozzebon, 2009). ISO 14001 and SA 8000, 2 are norms and certifications for processes and provide

monitoring tools for sustainability (Petrini and Pozzebon, 2009). The Global Report Initiative began as project information templates with benefits and social actions for sustainability transparency (Petrini and Pozzebon, 2009). Indexes, such as the Dow Jones Sustainability Indexes, valorise to seek balance between financial performance and socially and environmentally concerned business practices, in addition to tracking their performance to provide for benchmarks in managing sustainability portfolios (Petrini and Pozzebon, 2009). Sustainability is thus an important corporate strategy with an increasing global collaboration of firms in their attempts to determine and monitor social and environmental operational impacts (Neto and Froes, 2001; Zadek, 2005; Petrini and Pozzebon, 2009).

Although sustainability is a goal of development and environmental management, the term itself has been used in numerous disciplines and in a variety of contexts, from the concept of maximum sustainable yield in forestry and fisheries management to the concept of a sustainable economy and society (Brown *et al.*, 1987). According to Brown *et al.*, (1987) the meaning is dependent on the context in which it is applied and on whether used in a social, economic, or ecological perspective, as it may be defined broadly or narrowly and in terms of temporal and spatial scale (Brown *et al.*, 1987). For this reason, there should be context to its definition to make it useful, and although conceptualisations of sustainability may differ in societies, the concept of indefinite global human survival requires basic support systems maintained by a healthy environment and stable human population (Brown *et al.*, 1987). Moreover, a clear understanding of global sustainability and the development of indicators of the state of basic support systems would allow for a useful framework in policy (Brown *et al.*, 1987).

2.4 Corporate and public responses to green efforts

All of these concepts (CSR, CER, natural capitalism, and sustainability) add up to a relatively new, but rather vague business ideal: being green. Analogously, as with the definition of sustainability, the term 'green' has many discussed meanings and definitions (Dangelico and Pontrandolfo, 2010). McDonagh and Prothero (1996) specifically identify several dimensions of the term 'green': ecologically-affected, political, corporate social responsiveness, fair trade, conservation, non-profit, new-consumerism, sustainability, and equality. Each concept is vast and focused on different elements and aspects, thereby creating confusion and providing unclear specifications and requirements for companies willing to become green (Dangelico and Pontrandolfo, 2010).

Company initiatives with objectives to reduce environmental impacts, at levels beyond compliance and regulation, are categorised under an umbrella of concepts including 'environmental management', 'greening of industry', 'ecological or environmental responsibility', 'environmental stewardship', 'industrial ecology', 'sustainable production', 'clean or cleaner production or technology', 'CSR', 'eco- or environmental innovations', 'ecopreneurship' and 'sustainability entrepreneurs' (Guziana, 2011). 'Greenness' and to 'be green' is an overall term for being more environmentally friendly – applicable across the board in business, products, and lifestyle (Guziana, 2011). According to Walley and Taylor (2002) however, when used in a sustainability context, greening refers to turning focus towards ecological sustainability. However, as discussed previously, a green economy is defined by the UNEP as one that necessitates fundamental focus to be placed on social issues in addition to environmental and ecological ones. It is thus evident that the definition of greening business and what it means is apparently unclear (Guziana, 2011), and this lack of fundamental understanding has led to imprecise terms in the degrees of what constitutes a green business or what is a genuine green business (Shrivastava, 1995).

Even between industries and sectors, the definitions of green business vary due to the different components and business processes of a sector. In Information Technology (IT), green IT is defined by Molla (2008, p. 757) as "A systematic application of ecological-sustainability criteria (such as pollution prevention, product stewardship, use of clean technologies) to the design, production, sourcing, use and disposal of the IT technical infrastructure, as well as within the human and managerial components of the IT infrastructure, in order to reduce IT, business process and supply-chain related emissions, waste and water use; improved energy efficiency and generate Green economic rent." Molla's definition clearly illustrates that green IT considers a holistic approach for its implementation. In practice however, major contributions of IT to sustainability have centred on reducing carbon footprints via reductions in energy consumption of companies' technical IT infrastructure thereby highlighting how green business in one sector may predominantly only address one aspect or process in greening business compared to another sector.

'It isn't easy being green' is a Kermit the Frog (from "the Muppet Show") one-liner that is being co-opted by business writers in their description of the challenges involved in achieving and maintaining green business practice for consumers and corporations (Amine,

2003). Disillusionment exists as these different definitions of 'green' require different components for inclusion, for example Zimmer *et al.*'s (2004) waste, wildlife, biosphere, population, health, energy, awareness, and environmental technology. Likewise in business processes, there are different components applicable in one sector more than another. Concerns about the response of corporations to these concerns have equally grown over the last two decades over companies making empty, questionable claims of green practices (Amine and Arnold, 1999). Green-washing is a term used to describe the act of misleading consumers in the environmental and green practices and benefits of a company, product, or service (The Green Business Guide, 2010). Some green initiatives are even used as a camouflage for environmental abuse (Westra, 1995; Schorsch, 1990). Green business practices are often not adopted, however, due to concerns of increased costs and reduced operational flexibility (Chau, 1990). Furthermore, there is consumer dismay and a recognition that environmental problems are more complex and require more than individual efforts of typical '4R' advice to redesign, reduce, reuse, and recycle (Amine, 2003). In spite of this, there are no set criteria across the board for what constitutes green business practice in South Africa. According to Amine (2003), greening should be a collaborative effort by corporations, governments, activist organisations, consumers, and individuals as sporadic efforts have limited geographical impact in their opportunity to resolve national green challenges.

A big part of the green movement has been driven by the consumer. Green business and marketing has been driven by the 1970's Green Movement, environmental and social pressures (Lampe and Gazda, 1995). Social concerns and pressures ultimately created effective forces for the environment including green political power and consumerism in conjunction with pressures from investors and employees (including management) having catalysed green business (Lampe and Gazda, 1995). Research shows that society is concerned with the environmental impacts of products they purchase (Schorsch, 1990) and that a company's environmental reputation determines purchases (Kirkpatrick, 1990). Therefore a definite relationship exists of environmental concerns influencing consumerism and thus consumers have the ability to pose social pressures on companies to improve environmental performance; retail can be considered an indirect mechanism for greening industry and a component of creating a green economy.

2.5 South Africa's developing Green Economy

2.5.1 Sustainable and green initiatives

Although a developing country, South Africa is the 12th biggest greenhouse gas emitter globally and the largest on the continent (Greenpeace Africa, 2011), and it is acknowledged by government that should climate change fail to be mitigated it could potentially undo advances in South Africa's development goals and Millennium Development Goals (GCX, 2011). One of the key strategies is prioritising mitigation in the energy, transport, and industrial sectors – the largest contributors of emissions, specifically by stimulating new or more efficient industrial activities (GCX, 2011). Other strategies include: including climate change response into all planning; incentives and disincentives (e.g. carbon tax), regulation and measures to behaviourally encourage transition to a low carbon society and economy (GCX, 2011). Trade measures from developed countries could apply to the trade of high carbon goods, and thus sectors will be given time and support to change to lower carbon production (GCX, 2011).

In South Africa, the Johannesburg Stock Exchange (JSE) – listed companies are required to produce an integrated report for all inclusive details of a company by including social, environmental, and economic performance in conjunction with financial performance (SAICA, 2008). There are however, no set standards on integrated reporting, which has led to the formation of the Integrated Reporting Committee (IRC) with the aim to provide guidelines on good practice in integrated reporting (SAICA, 2008). The IRC will collaborate with the International Integrated Reporting Committee (IIRC), which in itself is an international collaboration of organisations including IFAC (International Federation of Accountants), the Global Reporting Initiative (GRI), and The Prince's Accounting for Sustainability Project (SAICA, 2008).

The JSE's Socially Responsible Investment (SRI) Index for sustainability performance is a driver for increased attention to sustainable investment into the South African market (JSE, 2011). The Index recognises listed companies that incorporate sustainability principles into business practices and serve as a tool for investors to assess this, thereby promoting sustainable business practices in South Africa (JSE, 2011).

Further adoption of green principles is evident on a national level in the New Growth Path government policy (IDC, 2010). Along with key drivers in the policy, specific focus is placed on sectors in order to generate an inclusive green economy (IDC, 2010). A green economy in the policy is targeted at a potential 300 000 in direct jobs by 2020 to over 400 000 by 2030 (South African Government, 2011). The policy's main changes are energy efficiency support and renewable energy use with strategies to encourage domestic production of inputs (e.g. solar water heaters initially) (South African Government, 2011). Core actions are geared towards renewable energy generation; development of green industrial measures; reductions in building energy and waste; social support in greening the economy; targeted skills development; driving environmental programmes (includes recycling and community cleaning); policy to support green technologies for households and enterprises (South African Government, 2011).

In May 2010, a Green Economy Summit was held by the South African government to formulate a Green Economy Plan that was aimed at building on its National Strategic Plan, National Framework for Sustainable Development, and other national strategies (UNEP, 2011). The country's 2010 budget emphasised that Green Economy initiatives create opportunities for enterprise development, job creation and commercial and residential environments (UNEP 2011).

In 2011, the National Climate Change Response Green Paper was released with the following business-related objectives: 34% reductions in greenhouse gases by 2020 and 42% by 2025; the use of incentives and disincentives (e.g. a carbon tax) for a transition to a low carbon economy and society; time-based action plans for commerce and manufacturing industries that will be measured, reported, and verified; mandatory greenhouse gas emissions annual submissions, by significant perpetrators, to the National Atmospheric Emission Inventory by 2012; energy efficiency and electricity demand management schemes and initiatives (GCX, 2011).

As shown in the evidence above, green business in South Africa is becoming more accepted and coordinated. In 2010, of the 100 top companies on the JSE 94% of 74 companies were considered 'green' for the voluntary submission of carbon emissions reports to the Carbon Disclosure Project (CDP) (The Green Business Guide, 2010). Questionnaires to 4 500

corporations in 2010 were sent that requested information on emissions, potential climate related risks and opportunities, and management strategies (The Green Business Guide, 2010). CDP is a global project supported by 534 institutional investors with trillions of US dollars in assets management (The Green Business Guide, 2010). A similar initiative run by the Green Building Council of South Africa (GBCSA) has a Green Star SA certification as a best practice requirement and guideline scheme for public and private sector buildings (CIBD, 2011). Clients are encouraged or required (if mandatory) to renovate, design, or construct according to the rating tools for certification of a green building (CIBD, 2011). At present, rating tools for an Office, Retail Centre, and Multi Unit Residential (Pilot Stage) exist (The Green Building Council of South Africa, 2011). The objectives of the rating tools are to establish a standard for green building, promote whole-building design, increase green building benefit awareness, recognise environmental leadership and reduce developmental environmental impacts within a number categories (The Green Building Council of South Africa, 2008). The nine categories of which are Management, Indoor Environment Quality, Energy, Transport, Water, Materials, Land Use & Ecology, Emissions, and Innovation (The Green Building Council of South Africa, 2008).

2.5.2 Green Business Sectors in South Africa

Many business sectors within South Africa are becoming green. The automotive component sector at a recent conference focused its aim of the global green economy on automotive component manufacturing (MediaClubSouthAfrica.com, 2011). Manufacturers were encouraged to diversity as components manufactured for vehicles can also be used in the renewable energy sector, as they were informed they needed to prepare themselves for change (MediaClubSouthAfrica.com, 2011). It is understood that greening of the industry needs to occur, and keep up with international pace, in order to ensure business for example; Mercedes-Benz South Africa is an exporter to the United States (MediaClubSouthAfrica.com, 2011). In order to also not rely on international technologies, investment in skills and technology was encouraged (MediaClubSouthAfrica.com, 2011). The component industry is potentially at risk of being left behind as imported complex manufacturing processes would take over (MediaClubSouthAfrica.com, 2011). In addition to the development of green cars, new models and technologies on original models will also develop to meet requirements and maintain production (MediaClubSouthAfrica.com, 2011). Greening of the sector is acknowledged to bring opportunity for growth and competition nationally and internationally (MediaClubSouthAfrica.com, 2011).

As previously mentioned, the Built Environment Sector is becoming more green through the hard work of the Green Building Council of South Africa (GBCSA); an independent, non-profit, membership-based organisation of leaders from all sectors of the commercial property industry (GBCSA, 2011). The GBCSA is a full member of the World Green Building Council and is the official certification body of buildings under a Green Star Rating System for South Africa (GBCSA, 2011). The organisation aims to ensure environmentally sustainable green practices and buildings in the sector through National Standards and Building Regulations, e.g. (SANS) 10400- XA, with specific requirements (GBCSA, 2011). This is being further supported by other rebate schemes, e.g. Eskom's Heat Pump Rebate scheme (SESSA, 2011).

In the Energy Sector, South Africa needs renewable energy to meet demands and to diversify its energy sources (energy mix) in order to increase clean energy production to 42 percent, by 2030 as planned for in the country's Integrated Resource Plan for energy resource provisions (AfDB, 2011). This sector is becoming increasingly green after a recent USD 365 million financial package from the African Development Bank (AfDB) (AfDB, 2011). This project is aimed at supporting national electricity through renewable energy projects in the country along with a transfer of knowledge to local experts (AfDB, 2011). In 2010, Eskom emitted roughly 224.7 million tons of CO₂, with approximately 90 percent of electrical energy produced in 2010 from fossil fuels, thereby making the economy one of the more carbon intensive globally (AfDB, 2011).

Within the Information, Communication and Technology (ICT) sector in South Africa, becoming green is inevitable as energy demands increase and overall plans of energy conservation, efficiency, and renewable generation necessitate that technology adapts and solves environmental resource use and waste generation accordingly. The Information Technology Association of South Africa (ITA), along with industry partners and organisations endeavour to guide industry to address environmental and electronic waste (e-waste) problems in South Africa (ITA, 2011).

Outside of specific business sectors, there are many organisations with the goal of assisting companies to meet the green demands. Cleaner Production in South Africa, is led by the National Cleaner Production Centre of South Africa (NCPC- SA) launched at the World

Summit for Sustainable Development in 2002, and is a collaboration program between the South African Department of Trade and Industry (DTI) and the Swiss and Austrian governments (NCPC, 2008). The Centre is implementing projects to support a sustainable competitive green industry and serves as the DTI's key environmental programme (Odendaal, 2011). Through Cleaner Production techniques the Centre aims to create competition and productivity nationally, with preventative techniques and measures for processes, services, and products aimed at minimising or eliminating waste and pollution production, resource optimisation and efficiency (Odendaal, 2011). In all the objectives of the NCPC-SA, it is aimed at creating sustainable value chains (Odendaal, 2011).

There has been huge pressure for the retail sector to join the green economy. The entry of international players into the market has helped retailers gain entry into the green economy (PWC, 2012). For many South African retailers, major investments are being made in their supply chains, such as centralised distribution and more advanced IT systems, for purposes of greater efficiency and increased pressures and competition (PWC, 2012). In this regard, there are a few green retail initiatives underway, aimed at reducing the environmental impacts of the retail industry (POPAI, 2011 (b)). Some of these have consequently led to a few of the South African retailers having received awards for social and/or green business practices.

2.6 The Role of Green Retail in a Green Economy

Retail plays a fundamental role in a Green Economy, particularly in the development and transition to one as the component in the supply chain that links consumerism, the consumption and demands on resources, with industry and green sustainable products, services, and processes. It also allows for sustainability in a green value chain, as retailers are decision-makers in the products in which they choose to offer for consumption, and can thus choose credible, verified green products and services for their consumers and ultimately influence consumption. According to McDonagh and Prothero (1996), new-consumerism is a specific dimension of green along with the other components of what constitutes green (conservation sustainability, corporate social responsiveness etc.), and as mentioned previously public expenditure and consumerism should drive public and private investments for a green economy. The relationship therefore does exist between environmental impact and consumerism so that consumers can apply social pressures on companies to improve their sustainable performance and this can be used conversely so

that retail may be seen as an indirect mechanism able to change consumer behaviour in favour of greening industry and the economy.

Retailers are seen as an essential component of the distribution process for green products as they sell to the consumers, and share the responsibility of claims made by green product manufacturers (Lampe and Gazda, 1995). Retailers are thus able to assist in verifying such claims as an aid to consumers (Supermarket News, 1992). Additionally, the retail sector has the potential to create significant change in society like no other industry, because retail is possibly the biggest source or purveyor of culture (Evans and Denney, 2009). Retailers are capable of defining environmental purchasing requirements, educating consumers at store level, and controlling goods and services offered to consumers, thus making this sector capable of influencing behaviour and consumption (Evans and Denney, 2009). Retail is the most extensive network in society, as they communicate through the cultural channels of internet, television, newspapers, social media, magazines, radio, shop windows and word-of-mouth (Evans and Denney, 2009). It is thus evident that the retail sector can play a pivotal role in the transformation of our communities and in the creation of a sustainable and green economy (Evans and Denney, 2009). Furthermore, retail can be utilised as a valuable indicator of the environmental performance or state of retail, in addition to indicating the progress of retail to more sustainable, green practices and the environmental demand or pressure of communities.

As existing industrialism uses high-quality natural capital or resources from nature (woods, minerals, etc), most products become waste so that the flow of materials increase and landfills continue to grow (Hawken *et al.*, 1999). According to Hawken *et al.*, (1999), of the solutions that exist in addressing this, one includes increasing the productivity of existing waste. Retail and consumerism has the potential to enforce the use of more biodegradable and environmental materials, selecting for products designed for the environment, and in possession of an eco-label or green-label on products. Retailers have the opportunity to educate, publicly disclose, and make consumers responsible for the environmental resources used and created in the production of a product (Hawken *et al.*, 1999).

According to the UNEP Division of Technology, Industry and Economics, the retail industry is able to influence producers, suppliers, consumers and address internal operations (UNEP

DTIE, 2002). The retail sector can change society unlike any other industry due to its broad reach globally and in consumerism as retailers communicate consumer demand upstream to suppliers and deliver products and services downstream to customers (UNEP, 2007(b)). As an international business, retail connects producers and manufacturers in separate continents (UNEP, 2007(b)). Within the supply chain, retailers can define environmental purchasing requirements (UNEP, 2007(b)). At store levels they are able to educate consumers on sustainability and environmental issues (UNEP, 2007(b)). Retailers control goods and services offered to consumers and thus influence global behaviour and consumption (UNEP, 2007(b)). For sustainable consumption, the retail industry is important for the two principal reasons: the main link between the consumer and the producer; and for changing current behaviour to sustainable behaviour by improving the market for sustainable products and increasing responsible use of products (UNEP, 2007(a)).

Within a green economy, Burdick (2010) states that staying ahead of regulation through environmentally conscientious product and process design is particularly applicable in the retail sector. A competitive advantage will be created as carbon and environmental footprints will continue to affect supply chains thereby allowing for green products to have comparable or lower prices (Branker *et al.*, 2011). Three main motivations and advantages are: creating a competitive advantage as competition in these sectors intensify so that the environmental profile of a company will gain more importance and weighting; the environmental responsibility of activities as environmental impacts are expected to grow accordingly; and environmental leadership is promoted by obliging companies to engage with the environmental aspects of their activities and production processes (Guziana, 2011).

2.6.1 The Retail Sector in South Africa

In Africa, the retail sector is dominated by the South African industry (UNEP DTIE, 2003). Within retail, supermarkets are the 'everyday' stores with the highest patronage, and hence must be considered to have the most potential for effective intervention in green retail and consumerism. Supermarkets are defined as those stores that sell a range of food and grocery products, with some selling a larger variety of products e.g., clothing etc.

South Africa has an expanding retail market with modern infrastructure supporting the relatively efficient distribution of goods to urban centres, townships and rural areas nationwide and within Southern Africa (GAIN, 2011). Since the end of 1994, and apartheid, there has been rapid growth in the food retail sector (GAIN, 2011). In spite of the global recession, South African retail sales grew by approximately five percent in 2009 (GAIN,

2011). Convenience has driven the growth in sales, as convenience stores, food court vendors, and street stalls/ kiosks have increased in sales (GAIN, 2011). This growing demand for convenience has resulted in the expansion of the supermarket retail sector and according to GAIN (2011), has presented U.S food producers with opportunities. The food and beverage market is becoming increasingly sophisticated, particularly in the supplying of local and imported products (GAIN, 2011). Retail outlets also offer the full spectrum of formats available, with a range of retail outlets including convenience drugstores (called cafés), small general-dealers, specialty stores handling a single product line (for example, clothing, electronics, furniture), exclusive boutiques, chain stores (groceries, clothing, toiletries, household goods), department stores, cash and carry wholesale-retail outlets, and co-operative stores serving rural areas (GAIN, 2011). Approximately 90 percent of inventories of consumer-ready products in these different stores are sourced locally (GAIN, 2011). According to GAIN (2011), the evolution of hypermarkets, or supermarkets (as termed locally), in South Africa, has been referred to as a phenomenon, selling large quantities of almost all consumer goods on a self-serve basis. These are located in suburban shopping centres and malls, and have placed pricing pressures on local retailers by purchasing directly from manufacturers and bypassing the wholesaler, typically with lower margins and higher turnover (GAIN, 2011). Retail chains also use their in-house import departments or third party distributors/importers to facilitate the purchase and delivery of imported goods (GAIN, 2011).

Retailers establish their own specific appeal as some target a particular shopper segment, such as upper-income groups (GAIN, 2011). Others however, are said to compete more so on price and a “shopping experience” (GAIN, 2011). Furthermore, these retail groups have significant bargaining power as they are able to dictate their buying terms to suppliers who are expected to deliver products to central depots or warehouses, where products are then distributed to supermarkets and retail outlet stores using their own transportation trucking system (GAIN, 2011). Some companies are favourable in township areas, whereas others are stronger in the smaller “up-market” segments (GAIN, 2011). Major supermarkets retail chains have a presence in both urban and rural areas and continue to open new stores, with most selling their own-label products as well as manufacturer’s brands (GAIN, 2011). The retail industry prefers to buy directly from local manufacturers, and for imported products they may deal directly with overseas manufacturers as an import agent or a distributor such as a ‘middleman’ can add up to 30 percent to the cost of the product, resulting in lower margins for the supermarket (GAIN, 2011). Retail supermarket chains predominantly maintain their own distribution systems, by using modern warehouses to allocate goods to

supermarket branches (GAIN, 2011). They also convert or revamp their less successful store brands to a more targeted consumer base to boost sales (GAIN, 2011). Supermarket chains are also buying back their franchised outlets to improve quality control (GAIN, 2011). Supermarkets recognise the growing demand for prepared food, and compete with convenience stores or quick service stores in addition to having increased fresh, prepared foods, and ready-to-eat meals (GAIN, 2011).

Food retailers in South Africa range from highly sophisticated supermarkets to street corner stalls. Previously, townships were unserved by large-scale food retailers, which created the growth of informal market retailers who catered to the needs of the residents via independent grocery stores such as cafes, general dealer stores and informal South African retail concepts (tuck shops, shebeens, taverns and spazas) including hawkers (street vendors), kiosks, take-aways and fast foods (GAIN, 2011). At the end of the apartheid era, major retailers expanded their stores to these townships (GAIN, 2011). The spaza shop was seen as the beginning of a new form of township convenience retailing because it was convenient and close to consumers with extended trading hours. These were usually run by informal traders. Informal traders are generally defined as retailers that are not registered for Value Added Tax (VAT) (GAIN, 2011). The informal retail market is an important channel of goods to customers; however, this sector may have peaked as more formal shopping centres are being developed in previously disadvantaged areas and townships (GAIN, 2011). According to PWC (2012), to secure future growth, these retailers are encroaching into the country's large informal food trade, from street hawkers through to spaza in townships and informal settlements. More stores are conveniently trading seven days a week (GAIN, 2011). Moreover, the major retailers and consumer goods companies have started to expand into the rest of Africa, along with continuous efforts to expand locally (PWC, 2012).

The rise of supermarkets in South Africa has occurred over the past decade as the dismantling of the state-supported marketing boards led to significant reductions in the farmers' collective bargaining powers, in addition to foreign competition as domestic markets opened to imports (Kirsten and Abdulrahman, 2009). Major supermarket chains' market share increased drastically as the share of small retailers decreased (Kirsten and Abdulrahman, 2009). Retail supermarket chains now control an ever-increasing market share of the food retail sector. This has led to farmers and food processors becoming more concerned with the competitiveness of the food marketing chain (Kirsten and Abdulrahman,

2009). Although market share is a good indication of possible market power, it does not provide full insight into market dynamics and thus recommended to be used with other methods and study for market conduct at the various levels of the supply chain (Kirsten and Abdulrahman, 2009). In addition to this, it is questioned as to whether the increasing market share of the large supermarkets creates barriers to entry by smaller chains or retailers (Kirsten and Abdulrahman, 2009). In a competitive environment where retailers want to maintain or increase their customers and market share, it is expected that in light of competition they may have to achieve competitive prices while still meeting consumer demands- including those of green and environmental issue and pressure.

With an entry of a global leader into the market, local retailers have to be efficient and effective in order to maintain competition (PWC, 2012). Nevertheless, few experts are forecasting merger and acquisition from foreign entrants as few major international food retailers appear to be quickly entering the African market, while fashion brands and other retailers are likely to expand organically, rather than via acquisition (PWC, 2012). According to PWC (2012) however, given the limited availability of free retail space, this growth will necessarily happen gradually. In spite of this, green retail in South Africa is looking to implement Best Practices internationally, some of which involve collaborations with organisations abroad for effective action in greening retail. For example, UN and other initiatives (e.g. the GBCSA's Retail and Shopping Centre Rating Tool) are in place. Specifically, the not-for-profit global association for marketing at retail, Point of Purchase Advertising International (POPAI) in South Africa has developed a Green Project Initiative that aims to lead the industry to a position of effective self regulation for sustainability improvements by addressing the areas of design, plant and premises, materials and processes, supply chain and logistics with self-set key performance indicators (POPAI, 2011(a)). The project is aimed at reducing the environmental impacts of Point of Purchase across the retail industry as a collaboration with members of the Association (e.g. Edcon, Company E) (POPAI, 2011 (b)).

Since the late 1990s, the number of supermarket stores in South Africa has increased steadily due to the basis that effective management and procurement systems create benefits of relatively low food prices (Weatherspoon and Reardon, 2003; Haese and Van Huylbroeck, 2005). Even in poor rural communities, the majority of households buy food items from supermarkets rather than from local shops or farmers due to lower food prices and variety (for those with higher income) (Haese and Van Huylbroeck, 2005). Although

supermarkets offer food security and improved livelihood development for communities, they are strong competitors for local shops and farmers and it is argued that local growers should have access to supermarket procurement systems (Haese and Van Huylenbroeck, 2005). According to Reardon *et al.* (2003a, b), in sales, in 2003 the 1700 supermarkets in South Africa were comparable to 350,000 small local shops. This would be socially sustainable as it would value local production and thereby support local markets and communities, and thus deemed green, sustainable action by supermarket retailers. In this way, it is evident that there is opportunity in the greening of supermarket retail, as greening and sustainability should include and provide for social (socio-economic) sustainability, and this is a theme that is fundamental in the creation of a socially-centred green economy.

In 2011, the Ogilvy Earth South Africa Sustainability Survey studied the relationship in South Africa between consumer attitude towards sustainability and environmental issues. Results showed that 85% of study respondents would boycott a company or brand if suspected of irresponsible or harmful action towards its people, community, or environment (Bizcommunity.com, 2011 (c)). Results showed that 76% are prepared to spend more for an ethical, socially and environmentally responsible product or service and general business practices (Bizcommunity.com, 2011(c)). A further 92.1% of respondents acknowledged climate change threats thereby proving that respondents are environmentally aware (Bizcommunity.com, 2011 (c)). Other outcomes showed that: 87.9% felt water conservation is inadequately addressed; 78% would recycle if it were easier to do; 84% consider the sustainable and renewable production of products to be important; 84% want companies to inform consumers about where food is sourced; 90% want simple education for reducing water and electricity consumption; 91% want news from big brands on positive contributions to society; 60.9% will select products according to CSR initiatives (Bizcommunity.com, 2011(c)). Of the respondents, 82% felt that CSR efforts should include: cleaning the environment; planting trees; providing food gardens and other community and environment projects; production pollution control from factories; social development e.g. schools and literacy programmes; and job creation for poverty alleviation (Bizcommunity.com, 2011(c)). Overall results on green-washing were that respondents were distrusting of green credentials (Bizcommunity.com, 2011(c)). Results showed that 76% feel all members of society have a role in these actions (Bizcommunity.com, 2011(c)). It is thus evident that South African consumers are willing to support a transition to, and are also driving a green economy.

We can see from this that consumers are interested in how green their products are. The amount of caring depends on the Living Standards Measure (LSM). LSM is a widely used marketing tool used to segment the population into 10 LSM groups with the highest living standard being 10 and the lowest living standard being 1, using criteria such as degree of urbanisation and ownership of cars etc (SAARF, 2012). Identifying the Living Standards Measure (LSM) will allow for the needs of the consumers to be met and will give clues to retailers on how to best influence consumer behaviour for greening objectives and purposes. Particularly as with increased LSM, there is an increased likelihood of education or awareness of green issues and thus increased pressure on retailers to become green. In a study by Vermeulen and Biénabe (2010) it was found that only a small share of households considered themselves as sensitive to environmental issues (LSM 9 and 10 consumers), and that about a third of consumers (LSM 7 to 10) consumed more expensive or alternative quality products (organic and free-range) (products associated with price premiums) despite a lack of knowledge or trust about it. For this reason, in cases of a lower LSM, retailers should still undertake the role of educating and informing consumers of green and environmental issues, and carry the responsibility of creating green awareness.

2.6.2 Retail Business Process Components for Greening

Because of international pressures, local competitive pressures, and consumer pressures, retail has had to change their Business Process Management (BPM) to encourage 'greening'. BPM is defined as all efforts in an organization for analysis and improvement in the fundamental activities such as manufacturing, marketing, communications and other major elements of a company's operations (adapted from Zairi, 1997)(Trkman, 2010). A business process is defined as a complete, dynamically coordinated or logically-related set of activities necessary to deliver value to customers or to fulfil other objectives (Guha and Kettinger, 1993; Strnadl, 2006; Trkman, 2010). BPM is one of the management and engineering techniques currently used as a mechanism to improve organisations. Although business processes are a series of interrelated activities linked together to produce customer value, they are said to form the integrative component of the organisation and this requires a holistic study of all organisation relationships and elements (jobs, competencies, measures, policies, etc.) (Van Rensburg, 1998).

BPM can be used as a tool for greening supermarkets by analysing the components within the business for more sustainable practices with minimal environmental impacts. For

example, distribution systems in supermarket chains need to channel fresh and frozen foods that require temperature-controlled warehouses and vehicles and many of these early facilities contained chlorofluorocarbon (CFC) refrigerants (that contribute to climate change and ozone depletion) (McKinnon and Woodburn, 1994). Consequently retailers are replacing these CFC's with others that are less harmful to the environment (McKinnon and Woodburn, 1994). As a component or element in the retailers operations, the distribution systems can be greened individually but the benefits of this contribute to the entire system of operations and create a more sustainable business and green value chain.

An example of best practice of one such approach is the case of Madagascar where procurement, as a business process, has attained a sustainable state. Roughly 10,000 small-scale farmers produce vegetables for supermarkets in Europe (Minten *et al.*, 2009). As a component of this global supply chain, small farmers' micro-contracts are coupled with intensive farm assistance and supervision programs to meet European supermarket requirements and standards (Minten *et al.*, 2009). This creates higher welfare and more income stability for those farmers with contracts (Minten *et al.*, 2009), and ultimately an improved quality of life and positive social development.

A similar practice exists in Southern Africa, where over 80% of all processed food products in Botswana, Namibia and Zambia are imported from South Africa, and supermarkets use a mixture of procurement systems for fruit, vegetable, and fruit products (Emongor and Kirsten, 2009). Participation in the supermarkets channel has a positive social impact as small-scale farmers have higher incomes than those who supply to traditional markets in Zambia (Emongor and Kirsten, 2009). It is therefore argued by Emongor and Kirsten (2009), that South African supermarket expansion into neighbouring countries may be beneficial to small-scale farmers and they should be included in the supply chain (Emongor and Kirsten, 2009).

According to Jim Sullivan (2010), retailers should study business processes in order to achieve corporate sustainability. Specifically, firstly the common area of improving the bottom line from cost savings from business process efficiencies as 30% or more can be saved by benchmarking operations around energy and climate change (particularly fuel use in warehouses, stores, fleets, lift trucks, logistic operations, refrigerant and cooling, etc).

Secondly, increasing market share (by increasing customer loyalty and product differentiation), new market entry (introduce new eco-friendly products), or margin improvement (with higher brand values). After improvements to a retailer's internal operations, collaboration with the value chain (suppliers or customers) will allow for increased opportunities for innovation, efficiency and cost-savings.

3. SUMMARY AND RESEARCH QUESTION

Many South African business sectors are entering the green economy due to international expectations, local competition, consumer demand, and, hopefully, wanting to do the right thing. Although there is much attention to becoming green within each business sector, the definitions and standards are changing and evolving. This study will capture a snapshot of current green retail in the South African supermarket sector.

The purpose of this study is to answer the research question, 'What constitutes green retail in the South African supermarket sector?'. The aims and objectives are to 1) investigate the sustainability of the companies green business processes, 2) assess how much the social component of sustainability is incorporated into business processes, and 3) identify the existing state of the green retail sector.

4. METHODOLOGY

4.1 Retail Selection

Companies within the retail sector were selected according to the following criteria. The companies needed to be supermarket retail stores that 1) were dominant retailers in terms of market share in South Africa, 2) had operations/ stores nationwide, 3) were similar in business process components for purposes of comparisons in greening of those business processes and 4) were considered as 'everyday' stores by consumers, with a high patronage. As part of the ethics procedure and conditions for participation in this study, and as agreed upon by the retailers as a condition of participation, the companies in this study were anonymously referred to and thus have been renamed Company A-E.

4.1.1 Company Description

Company A:

Company A holds 38% of the market share (Mail and Guardian, 2011). The retailer operates nationwide and has 1421 corporate and 400 franchise outlets in 17 countries across Africa and the Indian Ocean Islands (Company A, 2013). The company is listed as a public company on the JSE Limited (Company A, 2013).

Company B:

Company B holds 28% of market share in South Africa (Mail and Guardian, 2011). The retailer operates nationwide and has a total of 775 stores, some of which are franchise stores (The Company B Group, 2013). The company is listed on The JSE Limited Securities Exchange (The Company B Group, 2013).

Company C:

Company C holds 28% of the market share in South Africa (Mail and Guardian, 2011). The retailer has over 1000 stores across Southern Africa (Company C, 2013). The company is listed on the JSE since 2004 (Company C, 2013).

Company D:

Company D holds 8% of the market share (Mail and Guardian, 2011). The retailer operates throughout Africa and into the Middle East, with more than 400 stores (Company D, 2013). The company is an investment holding company and listed on the JSE (Company D, 2013).

Company E:

Company E holds 8% of the market share (Mail and Guardian, 2011). The retailer operates in 12 countries in sub-Saharan Africa through 330 stores (Company E, 2012). The company is listed on the JSE Limited (Company E, 2012).

4.2 Questionnaire Generation

A questionnaire was generated to ask these companies questions based on the three aims of the study.

International and national criteria, practices, objectives (UNEP's Green Economy, WWF, The Global Reporting Initiative, The Green Building Council of South Africa, etc) and other interdisciplinary principles (natural capitalism, industrial ecology, vulnerability science, sustainability etc), were reviewed to create an initial list based on different environmental variables and principles that required a presence in the questionnaire. This list was then narrowed down and focused to portions that were applicable to, and within the scope of, retail and the aims of the study. Business processes were selected for their potential as a greening component of overall business, and were added to the list of topics.

The questionnaire was then created with a focus and direction on the aims of the study, and was inclusive of business process management, international and local criteria, principles of environmental, social, ecological and business concepts applicable to the retailers in question.

Consultants in various fields, including green business, were approached for expertise and insight into the topic, and assisted with changing and verifying the questionnaire. Business processes suggested for including were Procurement Policy; Distribution Network and Systems, Store Operations, Human Resource Practices, Consumer Education, Technology and Management Practice. Research into the common business process for greening was also carried out to establish which processes should be included in the study.

4.3 Questionnaire distribution, collection, and supplementation

Questionnaires were either completed in person in an interview, via email or a telephone call, depending on the preference of the interviewee based on their availability and time. In all instances, the background information for this study and its aims were explained to interviewees in person or via telephone call.

The responses from the questionnaires were supplemented with the most recent, publicly available Company Sustainability and/or Annual Integrated Reports. This was a necessary step for purposes of ascertaining data that may have been overlooked by interviewees, or in a case of non-participation. Company A did not submit a questionnaire and thus only their publicly available reports were utilised in the study.

4.4 Analysis

Once the questionnaires were completed, the qualitative answers to the questionnaire and company reports were then used to assign levels based on the commitment to sustainability of a company process or component. This analysis allowed for the integration and comparison results. Green retailers were assigned levels for the following categories: green business processes of procurement policies, distribution networks, store operations, technology and management, marketing, the credibility of sustainability, and the mechanisms of sustainability, the social commitments and aspects of sustainability through their human resource management, consumer education, and social environmental practices. The current state of green retail in South Africa was assessed through the differences in the definitions of green retail, sustainability objectives, drivers of sustainability, JSE CDP participation, industry or public recognition of best practice frameworks, environmental or socio-economic principles, management and value systems, current sectoral trends, the influence of green trends, and future trends in green retail.

A five-level scale has been used to allocate different levels to the qualitative answers of the questionnaire from 1 to 5 to reflect a perceived level of commitment in terms of sustainability of company processes or components on a scale. The levels are as follows:

- 1- Absent or vague plans to investigate such a commitment
- 2- Plans and investigations to commitment are underway
- 3- Commitments are undergoing development or construction
- 4- Commitments operational but with challenges or not fully developed
- 5- Fully operational and developed commitments

5. RESULTS

5.1 The Level of Company Commitment to Sustainability in Green Business Processes

The commitments of green business processes in effect or in planning between the retailers are fairly similar, except for Company A which fell far behind on all commitment levels (Table 1). Select details from the questionnaire have been used to provide more information of the similarities and differences. The full answers to the questionnaire can be found in Appendix 1. Components addressed under Green Business Processes were procurement policies, distribution network, store operations, technology and management, marketing, the credibility of sustainability, and the mechanisms of sustainability.

5.1.1 Procurement Policies

Three of the five companies had full commitment levels to a green procurement policy (Table 1). Most of the retailers work closely with their suppliers to become sustainable, with some having specific programs for their development e.g. Company B's Small Business Incubator and Company D's Enterprise Development Program. These efforts aim to provide social value to the communities in which they operate, in addition to securing a resilient supply base for the retailers, as they remove supply chain entry barriers into the supermarket retail industry for small-scale farmers.

A 'dirty' supply chain, as pointed out by Company E, is where most impacts can seemingly be found and thus retailers are focusing on this area, and Company E addresses this by having a global ethical sourcing program. Improvements also include increased resource productivity developments in energy, greener water and packaging, as well as efforts in green building design. Many stores are being retrofitted and new stores will be built according to a green model (e.g. Company B and Company D's have new green store models that are planned for expansion). Furthermore, there is increasing interest in the potential and responsibility of business to contribute to food security, specifically in cross-sector collaboration, as this can also improve value chain efficiency.

Table 1. Level of Company Commitment to Sustainability in Green Business Processes

Process/ Component	Description	Company Commitment Level				
		A	B	C	D	E
Procurement Policy	The acquisition of economically, environmentally, and socially sustainable goods and services	1	5	4	5	5
Distribution Network	The sustainable distribution of goods and services from producer to consumer through a system of people, storage facilities and transportation	1	4	4	4	4
Store Operations	Sustainable or green features implemented in-store of retailer operations.	2	4	4	4	4
Technology and Management	Green components and developments in technology and management or information systems	1	4	4	4	4
Marketing	The communication of the value of green products, services and value to customers through various media.	1	4	4	5	4
The Credibility of Sustainability	The adoption of external sustainability standards and measures in the absence of national ones	1	4	3	4	4
Mechanisms of Sustainability	The adoption of mechanisms or tools that facilitate sustainability within processes	1	4	3	5	4

5.1.2 Distribution Network

Company A's green distribution commitments are limited to the packaging and waste initiative of re-usable roll-tainers that replace wooden pallets. All other green process commitments are fairly similar between the other retailers (Table 1). Similar green business process advancements in distribution networks include sustainable transport strategies with route optimisation, optimised logistics, Euro 5 technology fleet vehicles, and the initiation of fuel projects underway by Company D and Company C that utilise biodiesel blends as fuel. Furthermore, a centralised distribution model is favoured by some of the retailers. Company B is superiorly effective in creating reductions in most of the resources associated with logistics and the distribution of resources in retailing, in comparison to a decentralised system of distribution. A common retailer distribution process that has improved is the use of less harmful refrigerant gases in refrigeration. Packaging initiatives are also being addressed specifically by Company B and D.

Within distribution centres, green business processes underway/planned, include distribution centre resource management initiatives using technology and smart systems, concepts and modifications in the environmental design of distribution centres that account for all water and waste management, energy efficiency, secondary packaging recycling initiatives (Company E), and other green parameter considerations. Company E specifically draws on expertise from their international group's expertise in their green business processes within their distribution network in dealing with the supply chain and regional distribution centre developments.

5.1.3 Store Operations

In-store green business processes are fairly similar between most retailers, although Company A has these commitments only under investigation at this stage compared to the other retailers who have many of these processes operational or under construction (Table 1). These similar in-store operation processes include energy and water-conservation initiatives, in-store waste, lighting, packaging, efficient refrigeration, sustainable building strategies, in-store awareness campaigns, education, and communication. Post consumer waste and consumption is addressed with recycling facilities at some of the retailers, a process that is becoming increasingly important to a portion of South African consumers. In spite of this, Company E have stated that one of their challenges was consumer indifference to in-store recycling stations installed at selected stores.

Some retailers have allocated committees to arrange and prioritise awareness and initiatives for specific education in sustainability, healthcare, or other issues. Employee programmes also function to grow sustainability across store network and encourage support in local projects.

Company B and D have recently developed green store models based on green building design and innovation that are planned for expansion to new stores, and for the retrofit of existing ones, where feasible. These stores will have more green business processes and features in comparison to previous store models, and for competitive purposes in the sector, this may lead to the other retailers redesigning their store models so as to also include green building principles for the resulting cost and sustainability benefits. Of the more exciting

developments, Company D has developed their own green building rating model that guides the building of new stores or the retrofitting of old stores.

5.1.4 Technology and Management

There is a general investment and commitment by most of the retailers into efficient technology for monitoring environmental data purposes in order to make reductions and improvements (Table 1). At present, this includes a focus in technology that allows for innovative projects to materialise, as they offer radical resource productivity. An example of this is the integrated solution of condensate harvesting for improved refrigeration at certain stores of Company E and D. Other processes and improvements include the use of a cold-chain 'best practice' in refrigeration for food safety, energy efficiency vehicles and other distribution technological advancements, lighting and energy efficient monitoring and monitoring technology, waste management initiatives and other developments in the technical, supervisory, and management competencies that support sustainability. These technological improvements are all planned to either retrofit existing systems or become standard in any new stores because of the multiple benefits of their use as integrated technologies. Technology and management advancements will also be present and operational in green store models by those retailers who have invested in their design. Furthermore, as stipulated by Company D, technology and management practice is investment specifically into efficient and green technology in real estate, logistics and supplier networks as part of green economy contributions. Company D has specifically motivated the economical benefits of green technological innovation and resource efficiency in real estate, logistics, and products groups or supplier networks.

5.1.5 Marketing

Most of the marketing of the retailers is integrated into the marketing of all business operations, unlike Company D that has allocated green marketing employees for the communication of their sustainability program (Table 1). Company D has claimed this to be beneficial in creating a feedback mechanism in environmental awareness, sales, and demand between the retailer and consumers. Other than reinforcing consumer trust and credibility of the retailers' efforts, it has opened the channels of communication between consumers in environmental issues as a mechanism to overall company sustainability

objectives. Other forms of marketing by the retailers involve TV program sponsorships, initiatives and other forms of marketing.

All companies had something to say about green-washing. This heightened awareness is probably due to the recently passed Consumer Protection Act No. 68 of 2008 which prohibits misrepresentation and false advertising in retail. This brings into question how the green marketing of these retailers is being verified in accordance with what standards, which is difficult to assess since there are no set standards for greening at present, as previously mentioned. Company C has pointed out their awareness of green-washing and the temptation to create impressions of responsible environmental performance, and thus companies should only be involved in initiatives that make business sense instead of the advertisement of green. Furthermore, within the reports used for Company C in this study, there is no use of the word 'green' at all. The term sustainability is fully integrated into the text and thus there is a clear sense of it being integrated into the business strategy. This was further emphasised in the questionnaire as sustainability was justified as 'simply making business sense' in all motivations and explanations for its integration and undertaking. A direct approach such as this eliminates any misconceptions of green-washing- of which was discussed and recounted in the questionnaire as to how companies should acknowledge the business case of sustainability, as opposed to advertising green and creating a misrepresentation of sustainability efforts.

5.1.6 The Credibility of Sustainability

Green business processes or components utilised for measuring the credibility of sustainability in operations are underway with Companies B, D, and E, with Company C having initiated their efforts in this area. Company A has not yet investigated this area of sustainability (Table 1).

Retailers are validating green practices or processes as sustainable predominantly through indirect and direct affiliations, partnerships in programs, or as retail membership in initiatives. They do this because there are no set green standards available at present in South Africa. Retailers are drawing on a number of, and thereby a combination of, frameworks, sustainability mechanisms (like eco-labels), principles, and organisational standards to

create an overall internal sustainability policy and green accreditation for company operations.

Due to the lack of standards and frameworks available locally, green practices are mostly validated internally with little external validation. Eco-labelling programmes and schemes are considered accreditation programs and a measure of credible sustainable programs such as MSC, FSC, and SASSI. Of the programs, memberships, or mechanisms for validating green practices, some include international NGO's or organisations of authority in the field, for example UNGC, WWF and Global Farming Practices. Codes of Practice include NSPCA-approved Animal Welfare Code of Practice and social, regulatory codes e.g. BEE Codes of Good Practice, and Employment Equity committees. There is also participation in local projects or initiatives e.g. CDP, NBI.

Internal objectives and Key Performance Indicators measurement systems are also used to measure their performance internally. The industry is becoming self-regulating through competition, trends, and the creation of their own Codes of Best Practice, eco-labels, and innovative methods of ensuring sustainability, currently with specific focus in procurement business processes. Company D specifically uses a Sustainability Scorecard, in addition to an internal system that allows for the sustainability of operations to be measured and validated by specific business units responsible for ensuring that targets are met and measured twice a year. Company E utilises the labelling programs, as do other retailers, as well as the JSE CDP report and internal auditing. Company E also stipulates that there are issues with verification that product life cycle analysis. There is difficulty in determining whether a sustainable option is significantly better than an unsustainable option. Furthermore, there are no standards to be measured against locally and no body for accreditation or measuring. Eco-labels themselves have many benefits, but may not necessarily cover all areas where needed- requiring an approach by the company to acknowledge that there is no substitute for being involved in the supply chain and identifying pragmatic opportunity to promote significant change.

5.1.7 Mechanisms of Sustainability

Sustainability mechanisms, such as eco-labels, are in use by most of the companies in the study with the exception of Company A (Table 1). Company C has just initiated partnership

with an eco-label organisation. Mechanisms of sustainability have mostly been answered by the interviewees and companies in terms eco-labelling programs based on those which are available to the South African industry. These pertain mostly to the sustainable procurement of seafood, sustainable product lines, ethically-sourced products (Fairtrade), reduced-chemical or organic labels, and sustainable farming practices. There are however, some that support social community upliftment initiatives.

Eco-labels are predominantly used as sustainability mechanisms by the retailers and generally are viewed as providing benefits of credibility and allowing for the traceability and transparency of a product to its source- thereby educating consumers on environmental and social resource use and issues. Most of the retailers have stated that there will be an increased use of these eco-labels, as well as a variety and combination of these used on products according to the environmental parameters affected. Company D specifically state that eco-labels are regarded as credible 'stamps of approval' for consumers who recognise the credibility of the organisations behind these eco-labels. Company D, also has in-house eco-labelling in line with their socio-economic and environmental initiatives as well as labels and logos, not certified, but used for awareness and education.

Other retailers do use eco-labels but may choose to not specifically enforce eco-labels as a procurement screen, but rather work with suppliers when pragmatic opportunity is available or when eco-labels are unavailable or limited (Company E). A limitation with eco-labels is that while there are numerous benefits, they may not necessarily cover all interlinked components - for example some eco-labels may neglect or place less priority on social issues. According to some of the retailers, a solution to this limitation is the approach that there is no substitute for being involved in smaller processes, and identifying pragmatic opportunity to promote significant change by developing and integrating sustainability into the operations of those who fall within the scope of a company's operations (i.e. measuring and developing sustainability within the supply base by working with suppliers to become more sustainable-as a component of overall company operations).

5.2 The Levels of Company Commitment to the Social Component of Sustainability

The levels of company commitment to the social component of sustainability were the same across the categories of human resource management, consumer education, and social

environmental practices (Table 2). Again, Company A fell behind in all categories with the exception of human resource management, where they were nearly on par with the other companies.

5.2.1 Human Resources Management

Most retailers' BEE and transformation strategies go further than regulatory requirements, so as to offer employee development and training, in addition to employee benefits. All retailers understand their responsibility in creating social upliftment and value to society and to their communities in which they operate. This is evident in the sustainability commitments of all the retailers in terms of their social commitments (Table 2), as their business processes that support this are established over years of development. Employee initiatives, programs, and recognition are part of all of the companies' objectives and operations. Healthcare, HIV/AIDs, HIV/ AIDS antiretroviral treatment (Company E), counselling and support, as well as other community initiatives assist in the support and growth of company employee and talent bases.

Human resource practices also see a valuing of human capital by all of the retailers, as talent and employee development is integrated and streamlined, focusing on training, bursaries and education (including tertiary university level and adult education), and skill development initiatives, some of which even extend to children or dependants of employees. This is carried out for the social empowerment of communities, in addition to its securing of future productivity and talent within the companies. Human resources processes are

Table 2. Level of Commitment to the Social Component of Sustainability

Process/ Component	Description	Company Commitment Level				
		A	B	C	D	E
Human Resource Management	The value of human capital and sustainability in the management and responsibility of the workforce,	4	5	5	5	5
Consumer Education	The responsibility of the retailer in the provision of consumer education on sustainability and green issues.	1	4	4	4	4
Social Environmental Practices	Social environmental practices that address the relationship between LSM and green consumerism	1	4	4	4	4

as part of the business case for sustainability, as explained by Company D that the value that their human resource programmes brings for employee retention, innovation and enthusiasm.

5.2.2 Consumer Education

Consumer education by the retailers generally extends to different forms of media used by the retailers in their efforts to educate consumers on issues of sustainability and health. For most retailers, these systems for consumer education are in place but still in the process of being improved (Table 2). Consumers are educated on issues of social, environmental, and general topics through various forms of communication, in-store media, social media, in-store decor and radio, eco-labels and through environmental and social campaigns and initiatives. It is an area that is seen as important by most of the retailers- as a responsibility to sustainability, but also as it further drives the demand and sale of green products. It provides for accountability and transparency, particularly in light of the recently effective Consumer Protection Act No. 68 of 2008 in which consumers are aware of their rights in the issue of misrepresentation in consumerism, applicable equally to false claims of green performance by retailers. Consumer education is seen as a particular responsibility of retailers as 90% of local consumers have claimed that they anticipate simple education in the environmental efforts of reducing water and electricity consumption. Good examples of some of the retailers' efforts to address this include Company C's Children Conference on sustainability and environmental issues, as well as Company E's Green Buyer's Guide.

5.2.3 Social-environmental practices

Trends in LSM regarding environmental demand and awareness are acknowledged by most of the retailers (with exception of Company A). Company B and D noticed that higher LSM groups are well-informed, with a demand for transparency in sustainability of products and a demand for customer feedback in this regard. Company C however, observed a general increase in environmental query and demand in all groups. Company E has found that there was a general misconception that higher LSM groups are more willing to pay for environmental products. Although higher LSM groups are more educated in environmental issues, Company E found they are not willing to pay more for environmental products. In this regard, there is a real reluctance to pay more for sustainable goods and Company E feels

that a consumer should not have to, as sustainable products can be produced and retailed for the same amount or less than that of a 'non-sustainable' product.

Engagement in different LSM groups and the education of lower LSM levels is addressed through feedback, engagement and accountability by some of the retailers. Despite efforts, Company E find there are still many uninformed or uninterested customers in the LSM target market. There are many programs and initiatives by some of the retailers that aim to educate school children, communities, and some lower LSM groups on sustainability issues using initiatives, promotions, and different forms of consumer education. Examples of such initiatives by the retailers include Company C's Children Conference on Sustainability and Company D's Making the Difference program that educates lower LSM school children.

Of the socio-economic, or socio-environmental initiatives underway that aim to address LSM target groups and social, environmental issues, efforts include the development of small-to-medium farmers in the supply chains, community-based projects that address food insecurity, programs that offer care and support to vulnerable children and adults, programs for education, and sustainable agriculture. Investment goes further to the provision of support for communities in need of HIV/AIDS care and free antiretroviral treatments (Company E). Companies are committed similarly (Table 2) in their aim to contribute and intervene where needed and in accordance with the different needs of each area. For example each one of Company C's regional distribution centres differs in the social support provided to the communities based on the needs of the region.

5.3 The Current State of Green Retail in South Africa

The state of green retail in South Africa was assessed in terms of the retailers definitions of green retail, sustainability objectives, drivers of sustainability, participation in the JSE CDP, industry or public recognition of practices or awards, the adoption and creation of best practice frameworks, incorporation of environmental and socio-economic principles, management and value systems, current sectoral trends, the influence of green trends, and future trends in the pipeline of green retail (Appendix 1). Retailers that showed a high level of commitment to social and sustainable green business processes had similar ideas, motivations and commitments to the above ideas.

5.3.1 The Definitions of Green Retail

The definitions of green retail between the retailers are all fairly similar (Appendix 1) in those companies that have a high level of commitment to green processes and overall sustainability of their operations. Green retail is defined by Company D as continued responsibility in creating social and environmental shared value across all operations, whereas Company C goes on to include specific processes that define green retailing. Company E's broad focus includes as many aspects as possible, with most impacts identifiable within the supply chain. Company B similarly views green as more than eco-friendly; a wider context of a company creating societal value. Company A's sustainability efforts (and overall commitment to the green process) are early in the development stages, and their definition of sustainability is described as 'forward-looking' in essence.

5.3.2 Sustainability Objectives

The overall objectives of sustainability are fairly similar between the companies – in their shared processes and initiatives of sustainable farming, water, energy, waste, social development, and transformation (inclusive of BEE requirements). General aims involve: reductions in environmental footprint impacts; operational impacts; the life cycle impacts of products; packaging and recycling facilities through the engagement of suppliers and consumers, and technological advancements. Further objectives include recognition as sustainability leaders in the industry, innovation in business, cost-savings and increased profits, the positive contribution to society and the environment, and the full integration and benefits of sustainability. Objectives are also defined as, and set in accordance with, the specific processes that compose the operations and scope of the retailer. The sustainability of the retailers' green practices and business processes are thus defined according to the specific processes required for their specific operations and most with a long-term perspective and responsibility as retailers that account for their operations, stakeholders and communities, and the environment in which they operate in order to address social and environmental sustainability issues.

5.3.3 Drivers of Sustainability

Most retailers agree that sustainability is predominantly driven and motivated by a sense of environmental and social responsibility, company value, culture and brand reputation, green consumer demand, and the business case of sustainability. Global, local and sector priorities

and pressures affect all retailers to create a benchmarking of trends and competition between them. Sustainability is further driven by the benefits of cost savings and the financial benefits of innovation, and, for some, the fact that sustainability makes business sense. The risks of climate change, food insecurity, a limited environmental resource base, in addition to developing national legislation in climate change and green economy ambitions are also drivers, particularly in compliance considerations. Social transformation is seen to be well established in regulatory compliance within all retailers of the study (as they are predominantly governed by BEE legal requirements), and this valuing of human capital as a resource is a long-term social criterion of sustainability principles.

5.3.4 JSE CDP Participation

All retailers in the study, with the exception of Company A, have participated in the JSE CDP study. Company A has not completed a full assessment yet but has plans for full disclosure and the setting of targets. In 2011, their first carbon footprint assessment was said to be initiated following CDP protocols with limited Scope 1 emissions and with an ability to report on Scope 2 emissions (electricity consumption) more accurately.

Of the benefits and outcomes of project participation, some retailers benefit from understanding and addressing their carbon footprint, while others acknowledge the project as a robust system of data collection used for footprint reductions to optimise and identify further reduction opportunities and establish focused key performance indicators. Some companies participate in the project but have specifically said they are not limited to the study, and choose to pursue efforts further than those included in the scope of the project. Furthermore, as specified by one of the retailers, electricity is said to be the most important scope. But as South Africa is still reliant on the fossil fuels and consumption of coal, the group is investigating the development of renewable energy projects as they attempt to source cleaner energy alternatives.

In spite of this, benefits of project participation also include increased transparency within the industry and the development and structure of company climate change strategies. Although carbon is measured as its own footprint and in accordance with its own scope and impacts in a project like the CDP, it is not the sole focus of the retailers- possibly due to the feasibility and potential of green operations that is becoming increasingly known. Carbon-related processes are not being isolated by any one of the retailers and retailers acknowledge that is only a component of their efforts and not sufficient alone in the greening of their businesses.

Some businesses have taken it a step further by investigating water impacts and the feasibility of water footprint accounting.

5.3.5 Industry or Public Recognition of Practices, Green or Social Awards

As the general public and industry become more informed in environmental and social issues, and business operations globally become more transparent and reported on, so do the comparisons of operations with standards and efforts available locally and abroad. South African green retailers have been awarded locally, and internationally (for example, Company D), for their leadership in specific categories or aspects of green issues e.g. consumer education. Green retailers are also becoming increasingly recognised through their inclusion in local and international recognised indices of sustainability, so that the environmental credentials and recognition of best practices seem to influence the preference for sustainable products.

5.3.6 The Adoption and Creation of Best Practice Frameworks

Best practice frameworks are not being solely adopted in isolation by retailers but, as previously mentioned, rather as a combination of principles or models e.g. SASSI procurement program, and Globalgap farming. There are also best practice guidelines in ethical, environmental, social aspects from either NGO's, international organisations or programmes, or local ones. Companies have selected these for their specific applicability or feasibility to local conditions or in line with company objectives. Where they are not met, it seems that the local retail industry is creating their own; eco-labels, criteria, procurement screens, and surveys. There are definite efforts to go above that which is required by regulation. These voluntary objectives and efforts are creating innovative, location-specific, solutions where eco-labels, programmes, and other mechanisms of sustainability may limit them or may not be feasible.

5.3.7 Environmental or Socio-Economic Principles

Environmental, social, and engineering design principles of Natural Capitalism, Vulnerability Science, Industrial Ecology, and Innovation were not familiar to all interviewees in the study, and it became evident that these principles may not be specifically implemented in the design of sustainability within the companies. If they are implemented, it is not in these terms or they are indirect benefits of green processes in company operations e.g. sustainable

farming practices, training of employees, packaging (resource productivity). Company B however, specifically uses a model that focuses on different forms of capital. Human capital was a consistent focus by all retailers, particularly in employee development and social efforts, etc. Elements of vulnerability science was also detected in Company B's mentioning of increasing 'resilience' - in securing their supply base for food insecurity- and this was mentioned by some of the other retailers in the study too. Company D also specifically have a program that aims to address the vulnerability of children. The innovation and development of unique processes (e.g. industrial or other) is a shared objective of most of the retailers in the study.

5.3.8 Management and Value Systems

Sustainability is a core drive or internal cause for top management in most of the companies of the study. Company D and B have specific multidisciplinary, steering committees for the prioritisation and direction of sustainability at an executive level. Sustainability issues at Company A are said to fall under senior management.

5.3.9 Current Sectoral Trends

The current trends observed by retailers in the study include the management, reduction, and improved efficiency in waste, water, energy, and carbon. A particular focus at present exists in packaging, specifically recyclable and recycled content inclusive packaging, and waste-packaging rationalisation. Sustainable and ethical procurement is also evident in most retailers' operations, and the sustainability of products through eco-labels and procurement processes that look to reduce impacts of the supply chain and create resilient, sustainable supply bases for the company business through sustainable agriculture and small farmer development. Focus at present also sees a shared emphasis on consumer initiative information and the green marketing of these initiatives, with increased transparency and accountability for organisations that make public commitments to green retail.

5.3.10 The Influence of Green Trends

Trends do seem to influence the companies' practices and competition as sustainability credentials add brand value for some retailers and are part of business strategy. Some of the retailers, like Company C and D, underpin that the business case for sustainability is an

overriding factor, while the approach of others requires a balance of stakeholder expectation with commerciality, business relevance and materiality in practices. One of the retailers in the study reiterated that retailers may not necessarily pursue trends, but rather that retailers have the same pressures and how these are addressed is often varied.

5.3.11 Future Trends in Green Retail

In common view by most of the retailers in the study, future trends anticipated for by local industry include: water security in the supply chain and the calculation of water footprints; waste (specifically e-waste); consumer education and awareness; sustainable agriculture and a wider supply chain; the identification of opportunities to improve the sustainability of products; and an increased focus on adaptation activities as climate change impacts increase.

Of the future plans and trends in the pipeline of South Africa's green retail industry, green store models are being expanded to new store installations or the possible retrofitting of existing ones. These changes to operations will be a drastic transformation in operation costs and business processes. Of the more unique projects to retail in planning, the feasibility of a Clean Development Mechanism (CDM) project is currently under investigation by one of the retailers that may create a secondary industry of operations and benefits within their existing system.

6. DISCUSSION

Green retail in the South African supermarket sector has broad, all encompassing, flexible, changing methods for making their companies green. The vast majority (in this case study, four out of five) incorporate environmental sustainability and the social component of sustainability into their business practices. The existing state of green retail is one of constant change and improvement.

6.1 The Level of Company Commitment to Sustainability in Green Business Processes

6.1.1 Procurement policies

Cleaning up supply chains and the insurance of sustainable and ethically-sourced products is a focus of the retailers. However in order for it to be effective and credible it will need to be extensive and thorough, and also subject to standards and criteria locally and internationally. Even so, retailers are abiding to the responsibilities as stipulated by the UNEP (2007, b), that within the supply chain retailers are able to define environmental purchasing requirements and change current behaviour to sustainable behaviour by improving the market for sustainable products and increasing the responsible use of products (UNEP, 2007(a)).

6.1.2 Distribution Network

As previously mentioned by Lampe and Gazda (1995), retailers are considered essential in the distribution process for green products as they sell to the consumers, and share the responsibility of claims made by green products. Retailers are thus able to assist in verifying such claims as an aid to consumers and are in a position to verify green production. Particularly as the retail sector has the potential to significantly change society like no other industry, as possibly one of the biggest sources of purveyors of culture (Evans and Denney, 2009). Distribution processes are seeing some of the measures explained by Evans and Denney (2009) capable of influencing consumption and behaviour, specifically those of: defining environmental purchasing requirements, educating consumers in-store, and controlling goods and services. Distribution measures will also look to improve operations in terms of sustainable transport strategies and in the storage and centralised distribution of local goods as these have been found to be more sustainable options by some of the retailers.

6.1.3 Technology and Management

Company D has specifically motivated the economical benefits of green technological innovation and resource efficiency in real estate, logistics, and products groups or supplier networks. National legislative development around climate change and the green economy in the last few years has impacted their operations and their objectives. By focusing on technology innovation and resource efficiency in real estate, logistics and the product groups, the Company has established their business case for sustainability and have developed their business model suitably, having saved over R105 million in the last five years. Improvements in technology may be where initial costs in green business processes

seemingly lie, but these investments become cost-saving processes, and this is particularly evident in resource productivity and optimisation measures- specifically the reuse of wasted heat energy in green store models etc. If these are designed for customised solutions- they may even provide for innovation in technology for the retailer, which would further add to the development of relevant technological advancements in this field.

6.1.4 Marketing

Research shows that society is concerned with the environmental impacts of products they purchase (Schorsch, 1990) and that a company's environmental reputation determines purchases (Kirkpatrick, 1990). In comparison to some of the other retailers in the study, Company D has specific allocated employees for green marketing, and the company has claimed that their marketing on green issues has increased the communication and trust between retailer and consumer. This could be a possible avenue for some of the other retailers, as if the marketing information is sustainably verifiable it cannot be deemed as green-washing. Furthermore, Company C previously was concerned with green-washing being a real temptation for some retailers to make false-claims of green processes, and therefore advised the adoption of sustainability for its business profitability. Some of the retailers see green marketing as a tool for marketing of their green reputation and green products, whereas some of the retailers have not adopted any green marketing as they perceive it to be a possible show of green-washing, this discrepancy between how valid green marketing is as a tool for consumer education should be made verifiable and accountable so as to remove green-washing as a practice.

6.1.5 The Credibility of Sustainability

As explained by Das (2006), environmental activities under CSR are voluntary so that environmental efforts are often not verifiable. The concern is that with CSR, in spite of a large amount of initiatives implemented by retailers in their sustainability efforts, no framework covers the issues of government standards, management systems, codes of conduct, performance standards and reporting, and assurance standards (Das, 2006). Instead, companies carry out individual components or use a combination of selected initiatives and thereby neglect issues such as the use of transparent monitoring mechanisms (Das, 2006). The retailers of the study are not subjected to any national green standards, and their efforts are voluntary even though the public may consider them to be accountable for environmental impacts. In this context, they have utilised various sustainability mechanisms, procedures, programs from international and local organisations and authorities on sustainability to create sustainable retail operations. How credible these

cumulative efforts are difficult to answer as although there is credibility and validity behind the well-known organisations that provide the partnerships and eco-labels, there is no set board or body in South Africa to assess them or create more locally and condition specific criteria and standards.

In the discussion of Company E becoming part of one of the world's largest retailer groups (PWC, 2012), there is a transfer of technology and expertise taking place. Company E is specifically tapping into Company E's international group distribution expertise as part of its expansion of its distribution centres (PWC, 2012). The international group as the international group has highly efficient distribution systems and operational efficiency in terms of sustainability (PWC, 2012), in addition to their overall operations. South African retailer companies in competition have responded saying that these increased competitive pressures from the entry of the international group into the market also drives local retailers to invest heavily in operational efficiency (PWC, 2012). Further pressure is expected to be added to already thin profit margins (PWC, 2012). Although Company E is now part of the international group, they are transferring expertise from abroad and applying it locally. However, there will be a transitional period to achieve this, which is coupled with Company E's original efforts and company talent who are modifying advice to local conditions and specifics as is noticeable in some of their responses in the study. Although Company E has many sustainability commitments underway, there are more in development from the international group that will increase the local Company E's sustainability credibility.

At a practical level, the key demand of CSR critics is that for CSR to be anything other than green-wash, it has to guarantee that companies are accountable for the direct and indirect impacts of their activities (Hamann and Kapelus, 2004). The same could be applied to green practices so that for green practices to be considered anything other than green-wash companies could maybe guarantee accountability.

6.2 The Level of Company Commitment to the Social Component of Sustainability

The results suggest that the social component of sustainability is even more engrained than environmental sustainability into retail business practice.

As stated by the UNEP (2007,b), consumer education is one of the roles of green retailers, that retailers should educate consumers on sustainability and environmental issues. Some of the retailers go further to assume responsibility of national issues in agriculture and the provision of sustainable resources, with a specific focus of national food security. This is in line with local South African consumer expectations, whereby 82% respondents felt that CSR efforts should include cleaning the environment, planting trees, food gardens and other community and environment projects, production pollution control from factories, social development, and job creation for poverty alleviation (Bizcommunity.com, 2011(c)). Desjardins (1998) believes that in order to meet the living standard needs, minimum demands, and secure provisions for the demands of future populations, significant economic activity is needed that recognises the only source for this economic activity to be natural resources.

Responsible CSR should go beyond voluntary business initiatives and market drivers to include the impacts of business on society (Hamann, 2003). Private companies should be regarded as development agents, particularly in partnership with government and civil society groups (Hamann and Acutt, 2003). Of the retailers in South Africa, the retailers that have fully integrated sustainability into their practices and business strategy have seemingly developed as leadership companies as they fulfil Das' (2006) specifications that leadership companies view CSR as more than a collection of discrete practices or initiatives motivated by marketing, public relations or other business benefits.

In the transition from CSR responsibilities to integrated sustainability in company strategy and operations, leadership companies view CSR as more than a collection of discrete practise or initiatives motivated by marketing, public relations or other business benefits (Das, 2006). Rather, their efforts are viewed as a comprehensive set of policies, practices and programs that have been fully- integrated into business operations, and decision-making processes that are supported by top management (Das, 2006). Although the retailers in the study face challenges and are in the process of integrating sustainability into their operations, many commitments are underway and in effect. Most of these efforts have materialised without regulation and standards but are nonetheless business commitments and a shift of from the conventions of brown economy industry to sustainable industry for a green economy.

6.3 The Current State of Green Retail in South Africa

6.3.1 *The Definitions of Green Retail*

Although the retailers define green retail similarly, there are still variations to a specific defined outline of what it should compose of. As specified previously, disillusionment exists as these different definitions may have varied components for inclusion, for example Zimmer *et al.*'s (2004) waste, wildlife, biosphere, population, health, energy, awareness, and environmental technology. Likewise in business processes, there are different components applicable in one sector more than in another that creates confusion and unclear specifications and requirements for companies willing to pursue a greening of their business (Dangelico and Pontrandolfo, 2010). The lack of green standards on a national scale contribute to this problem in the specifications and definition of green, and therefore the provision of a clear and standard definition would eliminate variability between green retailers. However, in the absence of a uniting definition, Companies have come up with varied, business specific definitions that often include more than a government regulation could demand.

6.3.2 *Drivers of Sustainability*

Company C, although just having initiated some of their developments, has been conservative not to overshoot their claims and professions of green, for fear of falsifying claims and green-washing. They specifically justify however, that sustainability should be adopted, not based on any other motivation, other than for the fact that is just 'makes business sense' – having conveyed how they have established the profitability and benefits of integrated sustainable business.

Company D, also has proven their business case for sustainability as the company has stated that national legislative development around climate change and the green economy in the last few years has impacted their operations and their objectives. By focusing on technology innovation and resource efficiency in real estate, logistics and the product groups, the Company has established their business case for sustainability and have developed their business model suitably, having saved over R105 million in the last five years.

6.3.3 JSE CDP Participation

Although carbon is measured as its own footprint and in accordance with its own scope and impacts in a project like the JSE Carbon Disclosure Project, it is not the sole focus of the retailers- possibly due to the feasibility and potential of green operations that is becoming increasingly known. Carbon-related processes are not being isolated by any of the retailers, and it is seemingly only one of the areas of overall sustainability endeavours.

In spite of this, benefits of project participation also include increased transparency within the industry and the development and structure of company climate change strategies. Furthermore, the concept of carbon foot printing has initiated the expansion of the accounting of a particular resource to other such that retailers have begun investigating their water impacts and the feasibility of water footprint accounting. This would be well worth pursuing, for business process purposes and resource use impacts- in the efforts of water conservation on a local and global scale.

6.3.4 Industry or Public Recognition of Practices, Green or Social Awards

As the general public and industry become more informed in environmental and social issues, and business operations globally become more transparent and reported on, so do the comparisons of operations with standards and efforts available locally and abroad. Although green retailers have been awarded locally, and internationally, for their green business processes e.g. consumer education, there is still a need for green standards and a local measure of sustainable retail as these environmental credentials influence green consumerism. In spite of a lack of standards available nationally, these can be valuable validations of their work depending on from where the recognition is received. Furthermore, there are local awards of recognition for good practice, and the criteria for how these are justified could be further area of research in this area.

6.3.5 The Adoption and Creation of Best Practice Frameworks

Best practice frameworks are being utilised in a combination of principles or models e.g. SASSI procurement program, and Globalgap farming, in the absence of sustainability standards or measures available nationally. Das (2006), shows how CSR activities are voluntary so that environmental efforts are often not verifiable. In order to address this, companies carry out individual components or use a combination of selected initiatives and thereby neglect issues of transparent monitoring mechanisms (Das, 2006). Therefore the

concern is that, in spite of a large amount of initiatives, no framework covers issues of government standards, management systems, codes of conduct, performance standards and reporting, and assurance standards (Das, 2006). In sustainability and green efforts, there is the possibility that retailers are addressing their green efforts in the same way as Das explains CSR efforts in the context of a lack of standards. In line with the progression of CSR in South Africa, CSR is at a stage of an integrated approach, by most of the retailers in the South African sector, that prioritises sustainable development and is linked to collaborative governance initiatives and partnerships (Hamann, 2009).

Where best practices or frameworks are limited or lacking, some retailers are creating their own; eco-labels, criteria, procurement screens, and surveys. These are definite efforts to go above that which is required by regulation, so that these voluntary efforts are creating innovative, location-specific, solutions. This may lead to the creation of South African condition-specific sustainable foundations, so that innovative models and best practice mechanisms developed locally will be recognised for their efficacy and innovation.

6.3.6 Environmental or Socio-Economic Principles

Although these fundamental principles were not familiar to all interviewees in the study, now that companies have been made aware of these terms, they now have an opportunity to familiarise and establish the concepts of sustainability for employees in the company. Whether they take this opportunity or not is still to be seen.

6.3.7 Management and Value Systems

By placing sustainability at the top of management operations, sustainability retains its emphasis and priority in the lower levels and becomes a part of organisational culture. This is a defining feature between companies that are leaders in sustainability as they go above minimum regulatory requirements and reporting standards to become companies with an organisational culture that integrates sustainability into all elements of business operations. This is evident in the commitment of some of the more sustainable green retailers of the study, as it has ensured an oversight and prioritisation of sustainability from the highest level of decision-making in the business to all levels of a company's structure. This would

therefore, be advisable and applicable to other retailers as a factor to commitment in their sustainability efforts.

6.3.8 Current Sectoral Trends

There are shared and common developments between the retailers at present, with a particular focus in the management, reduction, and improved efficiency in waste, water, energy, and carbon. Additional ones include recyclable and recycled content inclusive packaging, waste-packaging rationalisation, sustainable and ethical procurement using eco-labels and procurement processes to make all components of the supply chain sustainable and further create resilient, sustainable supply bases through sustainable agriculture and small farmer development. Consumer education has created an increased awareness in the issues of transparency and the accountability of organisations in their public commitments to green retail.

6.3.9 The Influence of Green Trends

Trends influence some of the retailers who see sustainability practices as sustainability credentials that can add brand value. Some retailers emphasise the business case for sustainability, while others require a balance of stakeholder expectation with commerciality, business relevance and materiality in practices. Although retailers may not necessarily pursue trends, they have similar pressures that are often variably addressed.

6.3.10 Future Trends in Green Retail

Future trends anticipated for include water security in the supply chain and the calculation of water footprints, waste (specifically e-waste), consumer education and awareness, sustainable agriculture and a wider supply chain, the identification of opportunities to improve the sustainability of products, and an increased focus on adaptation activities and climate change impact. Other plans include the expansion and retrofitting of green store models, further improvements in green business processes, and the possibility of a CDM project for one of the retailers.

Although retailers are often faced by the same pressures, some retailers may face different scenarios in accordance with their business model and type of operation. Company C for example, has a particular model to franchise operations and for this reason may emphasise

different green processes (e.g. distribution) in comparison to other retailers. It may provide for a different approach and the possibility of innovative ways to operate sustainably through their distribution centres to influence and train their franchises. As new franchises are an important part of their strategy, they have offered environmental leadership to their franchised stores and in order to facilitate sustainability objectives. For this reason, their results and business model in the next few years may develop differently to others due to differences in their original business model.

The green retail sector is one of concentrated competition as there are a small number of major retailers who dominate the market. Furthermore, there is a transparency and collaboration between the groups that will drive the development of green retail within the country- to some of the best practices seen internationally. An example of this is Company D, which was recently placed in the top three for responsible retail internationally. Moreover, established companies are transforming their operations under new models that are efficient in the value of the different forms of natural capital, innovation, and industrial process design so as to ensure long-term sustainability of business in an environment where resources are valuable and limited.

However, there are retailers who may not choose to adopt green business practices due to concerns of increased costs and reduced operational flexibility (Chau, 1990). Retailers like Company A would benefit from further investigation into the cost benefits of sustainable business processes. Company A is the only retailer investigated that hasn't seemed to understand the benefit of sustainability and thereby accomplish a pragmatic approach to efficiency. For retailers still unsure of green business, the pragmatic approach to costs and resource use makes sound business sense as these are revised to radically optimise resource use and productivity for long-term provisions. An example from Company D clearly shows that by focusing on technology innovation and resource efficiency in real estate, logistics and the product groups, over R105 million can be saved while reducing energy and fuel usage, packaging, and increasing the use of recycled materials in operations and products. Furthermore, retailers need to acknowledge their responsibility and accountability as they may be most likely held accountable in the future, even possibly for previous impacts on society and the environment.

6.3.11 The value of Natural Capitalism

The companies in this survey recognise the value of natural capital. They know that the environment sustains and provides for the entire economy so that the availability and functionality of natural capital (particularly life-supporting services) is the limiting factor to future economic development. They recognise that poorly designed business systems, population growth, and wasteful consumption primarily cause the loss of natural capital and that addressing these issues are necessary in order to create a sustainable economy. Future economic progress will rely on placing value on all forms of capital (human or social, manufactured, financial, and natural) (Hawken et al., 1999).

Of those applicable to retail, radical resource productivity, creating a service and flow economy, and investing in natural capital have the potential to generate multiple benefits and opportunities and reduce negative environmental impact to create economic growth and alleviate poverty through the creation of jobs (Hawken *et al.*, 1999). An approach of natural capitalism is an opportunity to radically use less resources, materials and energy and promote sustainability for the purposes of supporting economic efficiency, ecological conservation, and social equity (Hawken *et al.*, 1999). Some of these principles and strategies are being implemented and utilised in the green business processes of the retailers at present, and future operations could include more innovative solutions, as retailers analyse their system processes without being limited to certifications and accreditations, and create solutions specific to their resources and systems.

6.4 Limitations

A limitation of the study is that there could have been a technique or method to measure the real progress of these companies relative to their level of commitments and information accessed in public company reports. This would have created an measure of accountability for the study so as to measure their genuine commitments to their objectives. This could have been implemented by site visits to the retailers' stores that could include the comparison of products in-store with regard to their eco-labels and in-house brand labels. This would also have been valuable in the verification of in-store consumer education and other processes that would have applied in-store operations. A further limitation is there could have been a method to measure the role of CSR in sustainability and green efforts so as to determine how integrated the two concepts are, and therefore, how the social value

and component of sustainability should be linked, integrated, or conceptualised with CSR efforts. This could also be an area of future research.

7. CONCLUSION

Resources are deteriorating while the demand for them, the human population, is increasing at an unprecedented rate in history. All anthropogenic activity is interconnected and thus all sectors and systems of society are affected by such a future prospect. The limits to prosperity and sustainability are becoming increasingly determined by natural capital over industrial force (Hawken *et al.*, 1999). Alcamo (2009) states that the ability of industry and sectors to lower climate change risks with every ton of emissions reduced – is considered real and specific. Consequently, as advocated by the UNEP, a green economy is an inevitable solution as climate change is attributable to anthropogenic activity resultant in greenhouse gas emissions.

Greening the economy is a strategy many nations have adopted to correct environmental and social degradation. This process of greening is a recent national government strategy. The transition to one necessitates a revision of existing 'brown economy' principles of business and industry for the adoption of new principles of sustainability. At this point in the transition, there are no set national standards or practices in sustainable business applicable to the retail sector so that the voluntary green claims of businesses are lacking in fundamental and integrated social, environmental and business sustainability. This creates variability and discrepancies across the industry as to what constitutes green business.

This perceived discrepancy formed the basis of this study. We wanted to know how retailers claim and validate their business processes as green, in addition to what they choose to encompass as green business in retail or how they choose to define its components. The purpose of this study was to answer the research question, 'What constitutes green retail in the South African supermarket sector?'. The aims and objectives were to 1) investigate the sustainability of the companies green business processes, 2) assess how much the social component of sustainability is incorporated into business processes, and 3) identify the existing state of the green retail sector.

In order to answer the main question, a group of supermarket retail companies were selected for based on the criteria that they were dominant supermarket retailers in terms of market share in South Africa, had operations/ stores nation-wide, had similar business process components for purposes of comparisons in greening of those business processes, and were considered as 'everyday' stores by consumers, with a high patronage. A questionnaire was generated to survey the companies' activities in green business. The questionnaire was generated based on different environmental variables and principles, and was supplemented with information and insight from industry consultants and expertise. Publicly available company reports were used to supplement the answers from the questionnaire with additional unaccounted for information. These qualitative answers from the questionnaire and supplemented report information were then used to critique and assign a level of commitment to the sustainability of companies' green business processes and social considerations of sustainability and to establish the current state of the green retail sector.

The main findings on the level of company commitment to the sustainability in green business show how the sustainable procurement of products and services is becoming increasingly accountable to green consumerism and to the sustainable operations of the retailers. Although used by most of the retailers, there are limitations with eco-labels and other sustainability mechanisms. Some retailers innovatively create their own or choose to be pragmatic and work with suppliers. Enterprise development and the support of small-medium farmers by the retailers is used to secure their supply base and create social upliftment in communities in the attempts to break down entry-level barriers into the supermarket retail industry for small farmers.

Distribution processes are allowing for retailers are to assist in verifying such claims to consumers and retailers are in a position to verify green production. Measures will also look to improve operations in terms of sustainable transport strategies and in the storage and centralised distribution of local goods. Innovation in technology and resource efficiency in real estate, logistics and the product groups, retailers can prove the business case for sustainability and assist to develop business models for cost benefits. There is variability and controversy surrounding green marketing as some of the retailers see it as a marketing tool of their green reputation and product lines, whereas some retailers have not adopted any green marketing as they perceive it to be a possible show of green-washing. Various sustainability mechanisms, procedures, programs from international and local organisations

and authorities on sustainability are being used to validate green efforts. How credible these cumulative efforts are is based on the credibility and validity of the well-known organisations who provide the partnerships and eco-labels, despite the fact that there is no set board or body in South Africa to assess them or create more locally and condition specific criteria and standards.

Company commitments to the social component of sustainability are varied. There is a general misconception that higher LSM groups are more willing to pay for environmental products. Companies noted that although higher LSM groups are more educated in environmental issues they are not willing to pay for environmental products. In spite of this, some of the retailers have made commitments to educate all LSM groups and have this responsibility. There are many socio-environmental practices underway, and the social aspect of many of these are more development than the environmental components based on the social transformation requirements and possible CSR history of South Africa.

Findings on the current state of green retail in South Africa show that although the retailers define green retail similarly, there are still variations to a specific outline of what it should compose of. The lack of green standards on a national scale contribute to this problem in the specifications and definition of green, and therefore the provision of a clear and standard definition would eliminate variability between green retailers. Sustainability 'just makes business sense' for some retailers, because they see the profitability and benefits of integrated sustainable business. However, companies like Company A do still need to discover the business, social, and environmental benefits of sustainability.

Participation in the JSE CDP is not the sole focus of the retailers, but there are benefits of increased transparency within the industry and the development and structure of company climate change strategies. Furthermore, the concept of carbon foot printing has initiated the expansion of accounting for other resources, such as water footprint accounting. As consumers become more informed, so do the comparisons of operations with standards and efforts available locally and abroad.

Current trends in green retail have a particular focus in the management, reduction, and improved efficiency in waste, water, energy, and carbon. Retailers may not necessarily pursue trends, but they have similar pressures that are often variably addressed. Some retailers regard sustainability practices as sustainability credentials that can add brand value. Others emphasise the business case for sustainability, while others balance stakeholder expectation with commerciality, business relevance and materiality in practices. Although retailers are often faced by the same pressures and thus trends emerge, some retailers may face different scenarios in accordance with their business model and type of operation.

Future areas of research could include the consideration of as how some retailers utilise green marketing as a tool for marketing of their green reputation and products, whereas some have not adopted any green marketing as they perceive it to be a possible show of green-washing. This discrepancy between how valid green marketing is as a tool for consumer education would be a possible future area of study and research. Another area of possible study is based on how although BPM is a tool useful to achieve corporate sustainability in retail (Sullivan, 2010), a possible integration and use of natural capitalism principles of industrial ecology and resource productivity etc. as specified by Hawken *et al.*, (1999), may be a future area of research in the greening of retail and corporate sustainability. There needs to be a more integrated and established technique to assess and measure green business in terms of sustainability principles of natural capitalism.

The retail industry in South African has almost privatised sustainability and socio-economic development as they have superseded legislation to contribute to society and transform communities and create empowerment over the years. Although South Africa is not a failing state, governance is not being relied upon within this industry and most of these major retailers are addressing sustainability nationally. This is an opportunity for them, in the early stages of green business in the country, to address their impacts, and in doing so- will be doing the environment, and society, service as they take responsibility in the conservation and consideration of natural resources. Particularly through their innovative, locally-specific solutions, these companies have an important role for efficiency and innovation in market economy and are capable of generating value from limited resources. Furthermore, these foundations are not only a must for future climate change and environmental mitigation or adaptation, but for the creation of a company that can function almost independently in its system by using its resources sustainably.

8. REFERENCES

The African Development Bank Group 2011: *African Development Bank Extends USD 365 Million to Help South Africa Green its Energy Sector*, The African Development Bank Group (AfDB) 2011, accessed 17 October 2011, <http://www.afdb.org/en/news-and-events/article/african-development-bank-extends-usd-365-million-to-help-south-africa-green-its-energy-sector-8073>

Alcamo J. 2009: *Climate: The Next Generation Updated title: Green Business: A Key to Protecting Climate*, United Nations Environment Programme, accessed 07 September 2011, http://www.unep.org/pdf/JosephAlcamo_B4E.pdf

Amine L.S. 2003: *An integrated micro- and macro level discussion of global green issues: "It isn't easy being green"*. *Journal of International Management*, 9, 373–393.

Amine L.S. and Arnold M.J. 1999: *Reflections on the future of green marketing: an essay*. Paper presented at the Annual Conference of the International Trade and Finance Association (IT & FA), Casablanca, Morocco.

Bansal P. 2002: *The Corporate Challenges of Sustainable Development*. *Academy of Management Executive*, 16,122–131.

Beder S. 1997: *Global Spin*. Scribe Publication, Melbourne

Berry M. A. and Rondinelli D. A. 1998: *Proactive corporate environmental management: A new industrial revolution*. *The Academy of Management Executive*, 12(2), 38-50.

Bruno K. and Karliner J. 2002: *Earthsummit.biz: The Corporate Takeover of Sustainable Development*. Food First Books, Oakland California

Bizcommunity.com 2011(a): *Unilever wins award for CSR, sustainability practices*. Bizcommunity.com, accessed 5 October 2011, <http://www.bizcommunity.com/Article/196/457/64614.html>

Bizcommunity.com 2011(b): *Company D' sustainability programmes recognised internationally*. Bizcommunity.com, accessed 15 October 2011, <http://www.bizcommunity.com/Article/196/457/64368.html>

Bizcommunity.com 2011(c): *Sustainability awareness grows amongst consumers*. Bizcommunity.com, accessed 5 October 2011, <http://www.bizcommunity.com/Article/196/457/65178.html>

Botkin D.B. and Keller E.A. 2005: *Environmental Science: Earth as a living planet*. Fifth Edition. John Wiley and Sons, Inc: USA.

Branker K., Jeswiet J. and Kim I.Y. 2011: *Greenhouse gases emitted in manufacturing a product—A new economic model*. CIRP Annals - Manufacturing Technology, 60, 53–56

Brown B.J., Hanson M.E, Liverman D.M. and Merideth R.W. Jr. 1987: *Global sustainability: Toward definition*. Environmental Management, 11, 6, 713-719

Burdick D. 2010: *Book review: The Truth About Green Business, Gil Friend with Nicholas Kordes and Benjamin Privitt*. Journal of Cleaner Production, 18, 29.

Chau S.S.C. 1990: *The environment. The Other Hong Kong Report*, 7990, 492-511, Chinese University Press, Hong Kong.

Ciliberti F., Baden D. and Harwood I. A. 2009: *Insights into Corporate Social Responsibility Practices in Supply Chains: A Multiple Case Study of SMEs in the UK*. *Operations and Supply Chain Management*, 2, No. 3, 154-166

Commission of the European Communities 2001: *Green Paper. Promoting a European Framework for Corporate Social Responsibility (COM) 366 final*, Brussels.

Company A Holdings Limited 2012: *Integrated Report*. Company A Holdings Limited, accessed 20 October 2012,

[http://www.CompanyAholdings.co.za/files/1019812640/Investor Centre Files/Annual Reports/Annual-Report-2012/4521 Company A%20WEB%20Integrated%20Report%20E.pdf](http://www.CompanyAholdings.co.za/files/1019812640/Investor_Centre_Files/Annual_Reports/Annual-Report-2012/4521_Company_A%20WEB%20Integrated%20Report%20E.pdf)

Company A Holdings Limited 2013, *About our Company Overview*, Company A Holdings Limited, accessed 4 January 2013,

<http://www.shopriteholdings.co.za/pages/1019812640/about-our-company/overview.asp>

Company B 2010: *PnP scoops another green award!* Company B (PnP), accessed 17 October 2011,

<http://www.picknpay.co.za/picknpay/content/en/news?oid=75716&sn=Detail&pid=10563>

Company B Group 2011: *Sustainable Living Report*. The Company B Group, accessed 20 October 2012, http://www.picknpay-ir.co.za/downloads/2012/pick_n_pay_report.pdf

Company B Group 2012: *Integrated Annual Report*. The Company B Group, accessed 20 October 2012, <http://www.pads.eezeepage.co.za/i/65854>

Company B Group 2013: *About Us*. The Company B Group, accessed 4 January 2013, <http://www.picknpay.co.za/picknpay/content/en/about-us-introduction>

Company C Group Limited 2011: *Integrated Annual Report*. The Company C Group Limited, accessed 20 October 2012, <http://www.Company C.co.za/Uploads/dea8cc16-9904-47c7-a08f-372368348220/2011 Anual Report TWO.pdf>

Company C Group Limited 2013: *Our Business*. The Company C Group Limited, accessed 4 January 2013, <http://www.spar.co.za/About-SPAR/Company>

Company D Holdings Limited 2012: *Good Business Journey 2012*. Company D Holdings Limited, accessed 20 October, http://www.woolworthsholdings.co.za/downloads/2012/good_business_journey_report_2012.pdf

Company D Holdings Limited 2013: *Corporate Profile Overview*. Company D Holdings Limited, accessed 4 January 2013, http://www.woolworthsholdings.co.za/corporate/profile_overview.asp).

Company E Group 2012: *Integrated Annual Report*. Company E Group, accessed 20 October 2011, http://www.massmart.co.za/invest_profile/financial_results/2012/massmart_ar2012/downloads/massmart_ar2012.pdf

Da Graça Carvalho M., Bonifacio M. and Dechamps P. 2011: *Building a low carbon society*. *Energy* 2011; 36, 1842-7.

Dahlsrud A: 2008. *How corporate social responsibility is defined: an analysis of 37 definitions*. *Environmental Management*, 15, 1–13

Dangelico R.M. and Pontrandolfo P. 2010: *From green product definitions and classifications to the Green Option Matrix*. *Journal of Cleaner Production*, 18, 1608 – 1628.

Das T. K. 2006: *Corporate Environmental Responsibility*. Excellence: Special issue on CSR, 3, 166-174.

DesJardins J. 1998: *Corporate environmental responsibility*. Journal of Business Ethics, 17(8), 825-838.

Dickie P. and Hiller M. 2007: *The Climate Savers Programme: How Corporations Can Save the Environment*. The World Wildlife Fund, accessed 07 September 2011, <<http://test.worldwildlife.org/climate/WWFBinaryitem8752.pdf>>.

Dummett K. 2008: *Corporate environmental responsibility*, PhD Thesis, School of Architecture and Design, RMIT University.

Emongor R. and Kirsten J. 2009: *The impact of South African supermarkets on agricultural development in the SADC: a case study in Zambia, Namibia and Botswana*. Agrekon, 48(1).

Evans W. and Denney M. 2009: *Best Environmental Practices of Leading Retailers from Around the World*, accessed on 17 October 2011, http://www.greeningretail.ca/Research/1526-GreeningRetailSummary-Oct21_SM.pdf

Fig D. 2005: *Manufacturing amnesia: Corporate Social Responsibility in South Africa*. International Affairs, 81: 599–617

Figge F. and Hahn T. 2012: *Is Green and Profit Sustainable? Assessing the trade-off between Economic and Environmental Aspects*. International Journal of Production Economics, article in press

Gladwell M. 2000. *The Tipping Point: How Little Things Can Make a Big Difference*, Little, Brown and Company, New York.

Global Agricultural Information Network 2010: *2010 Annual Retail Food Sector Report*. United States Department of Agriculture

The Global Association for Marketing at Retail 2011(a): *Green Project*, The Global Association for Marketing at Retail (POPAI), accessed 15 October 2011, <http://www.popai.co.za/green-project>

The Global Association for Marketing at Retail 2011(b): *Promoting Marketing Retail*, The Global Association for Marketing at Retail (POPAI), accessed 15 October 2011, <http://www.popai.co.za/wp-content/uploads/2011/02/What-is-POPAI-SA-20111.pdf>

The Global Carbon Exchange Carbon Footprint Assessment and Energy Services 2011: *The implications of South Africa's Green Paper for businesses*. The Global Carbon Exchange (GCX), accessed 16 October 2011, <http://www.globalcarbonexchange.com/the-implications-of-south-africa-s-green-paper-for-businesses.html>

The Green Building Council of South Africa 2008, *The Insider Guide to Green Star SA*. The Green Building Council of South Africa (GBCSA), accessed 15 October 2011, <http://www.gbcsa.org.za/docs/FACT%20SHEET%20Green%20Star%20SA%20-%20Oct%202008.pdf>

The Green Building Council of South Africa 2011, Green Star SA Rating Tools, accessed 15 October 2011, <http://www.gbcsa.org.za/greenstar/ratingtools.php>.

The Green Business Guide Web Services 2010, Green Standards and Laws, The Green Guide, accessed 07 September 2011, <http://www.greenbusinessguide.co.za/green-standards-laws/carbon-footprinting-2>

Greenpeace Africa 2011: *Greenpeace Africa submission on the draft National Climate Change Response Green Paper – February 2011*. Greenpeace Africa, accessed 15 May 2012,

http://d2zmx6mlqh7g3a.cloudfront.net/cdn/farfuture/mtime:1299832726/files/docs/110309greenpeace_0.pdf

Guha S. and Kettinger W.J. 1993: *Business Process Reengineering*. Information Systems Management, 10 (3), 13-22.

Guziana B. 2011: *Is the Swedish environmental technology sector 'green'?* Journal of Cleaner Production, 19, 827 - 835.

Haese M. and Van Huylenbroeck G. 2005: *The rise of supermarkets and changing expenditure patterns of poor rural households' case study in the Transkei area, South Africa*. Food Policy, 30, 97-113.

Hamann R. 2003: *Corporate Social Responsibility and Its Implications for Governance: The Case of Mining in South Africa*. Paper submitted to, 212.

Hamann R. and Acutt N. 2003: *How should civil society (and the government) respond to 'corporate social responsibility'? A critique of business motivations and the potential for partnerships*. Development Southern Africa, 20(2), 255-270.

Hamann R. 2009: *South Africa: The Role of History, Government, and Local Context*. Global Practices of Corporate Social Responsibility 2009, 435-460.

Hamann R. and Kapelus P. 2004: *Corporate Social Responsibility in Mining in Southern Africa: Fair accountability or just green-wash?* Society for International Development, 47(3), 85–92

Hamann R., Giamporcaro S., Johnston D. and Yachkaschi S. 2011: *The role of business and cross-sector collaboration in addressing the 'wicked problem' of food insecurity.* Development Southern Africa, 28(4), 579-594.

Hawken P., Lovins A.B. and Lovins H. 1999: *Natural Capitalism: Creating the Next Industrial Revolution.* Little Brown and Co. USA.

Healey M. 2009: *Analytics report: the eco-enterprise and the reality of green IT.* Information Week

Industrial Development Corporation 2011: *Key Government Policies.* Industrial Development Corporation 2010, accessed 16 October 2011, <http://www.idc.co.za/policies/policies-plans.asp>

The Information Technology Association of South Africa 2011: *Waste not, wants not, want not... the e-waste situation in South Africa,* The Information Technology Association of South Africa (ITA), accessed 17 October 2011, <http://www.ita.org.za/EnvironmentalProgramme.htm>

The Johannesburg Stock Exchange 2011: *Introduction to SRI Index.* The Johannesburg Stock Exchange, accessed 15 October 2011, http://www.jse.co.za/About-Us/SRI/Introduction_to_SRI_Index.aspx

Kirkpatrick D. 1990: *Environmentalism: The New Crusade.* Fortune, 44-52

Kirsten J. and Abdulrahman A. 2009: *The Impact of Market Power and Dominance of Supermarkets on Agricultural Producers in South Africa: A Case Study of the South African Dairy Industry. A Report Commissioned by the National Agricultural Marketing Council.* Accessed 15 May 2012,

http://www.namc.co.za/ASSETS/NEWpdf_18_05_09/THE%20IMPACT%20OF%20MARKET%20POWER%20AND%20DOMINANCE%20OF%20SUPERMARKET%20finalZ_09_05_15.pdf

Lampe M. and Gazdat G.M. 1995: *Green Marketing in Europe and the United States: an Evolving Business and Society Interface.* International Business Review, 4, 295 – 312.

Leggett J. 1996: *The Emerging Global-warming Market-Driver in the Energy Sector: A Status Report.* WREC 1996. Green College Centre for Environmental Policy and Understanding. University of Oxford and Director, Solar Initiative, Greenpeace International.

Mail and Guardian 2011: *Big five fight for food market share.* The Mail and Guardian Online, accessed 16 May 2012, <http://mg.co.za/article/2011-11-04-big-five-fight-for-food-market-share>

MediaClubSouthAfrica.com 2011: *South Africa's auto industry to turn green.* The International Marketing Council of South Africa (IMC), accessed 16 October 2011, http://www.mediaclubsouthafrica.com/index.php?option=com_content&view=article&id=2557:auto-industry-130911&catid=45:economynews&Itemid=114

McDonagh P. and Prothero A. 1996: *Green Management: a Reader.* The Dryden Press, Harcourt Brace & Company Limited, London, UK.

McKinnon A.C. and Woodburn A. 1994: *The Consolidation of Retail Deliveries: its effect on CO₂ emissions.* Transport Policy, 1(2), 125- 136

Mine C. 2007: *IT'S thinking but not yet acting green*. ComputerWorld.

Minten B., Randrianariso L. and Swinnen J.F.M. 2009: *Global Retail Chains and Poor Farmers: Evidence from Madagascar*. World Development, 37 (11), 1728–41.

Molla A. 2008: *GITAM: A Model for the Adoption of Green IT*. 19th Australasian Conference on Information Systems, 658 – 668. Christchurch.

The National Cleaner Production Centre of South Africa 2008: *The National Cleaner Production Centre of South Africa*, accessed 17 October 2011, <http://www.ncpc.co.za/>

Neto F.P.M. and Froes C. 2001: *Gestão da Responsabilidade Social Corporativa: Um Caso Brasileiro*. Qualitymark, Rio de Janeiro.

Odendaal N. 2011: *Programme aims to create competitive green industry in SA*. Engineering News. Creamer Media, accessed 17 October 2011, <http://www.engineeringnews.co.za/article/sustainable-transformation-is-sa-hopes-2011-08-12>

Petrini M. and Pozzebon M. 2009: *Managing sustainability with the support of business intelligence: Integrating socio-environmental indicators and organisational context*. Journal of Strategic Information Systems, 18, 178–191

PriceWaterhouseCooper 2012: *South African retail and consumer products outlook*. PriceWaterhouseCooper, accessed 21 July 2013, http://www.pwc.co.za/en_ZA/za/assets/pdf/retail-and-consumer-products-outlook-2012-2016.pdf

Reardon T., Timmer C. P., Barrett C. and Berdegue´ J. 2003: *The rise of supermarkets in Africa, Asia and Latin America*. American Journal of Agricultural Economics, 85(5), 1140–1146.

Rondinelli D.A. and Berry M.A. 2000: *Environmental citizenship in multinational corporations: Social responsibility and sustainable development*. European Management Journal, 18(1), 70-84.

The South African Advertising Research Foundation 2012: *Living Standards Measure*, accessed 17 May 2012, <http://www.saarf.co.za/LSM/lSMS.asp>

The South African Institute of Chartered Accountants 2008, *An integrated report is a new requirement for listed companies*, The South African Institute of Chartered Accountants, accessed 15 October 2011, <https://www.saica.co.za/tabid/695/itemid/2344/language/en-ZA/An-integrated-report-is-a-new-requirement-for-list.aspx>

The South African Institute for Chartered Accountants 2010: *The King Report on Corporate Governance*. The South African Institute for Chartered Accountants 2010, accessed 15 October 2011, <https://www.saica.co.za/TechnicalInformation/LegalandGovernance/King/tabid/626/language/en-ZA/Default.aspx>

Schorsch J. 1990: *Are Corporations Playing Clean with Green?* Business and Society Review, 75, 6 - 9.

Shrivastava P. 1995: *Environmental technologies and competitive advantage*. Strategic Management Journal, 16, 183 - 200.

Sorescu A., Frambach R.T., Singh J., Rangaswamy A. and Bridges C. 2011: *Innovations in Retail Business Models*. Journal of Retailing, 87S, S3-S16

Strnadl C.F. 2006: *Aligning business and it: The process-driven architecture model*. Information Systems Management, 23(4), 67–77.

Supermarket News 1992: *Retailers Urged Not to Use "Green Marketing" as Gimmick*. 23 March, p. 12

Trkman P. 2010: *The critical success factors of business process management*. International Journal of Information Management, 30, 125–134

The Sustainable Energy Society of South Africa 2011: *Heat Pumps*, The Sustainable Energy Society of South Africa (SESSA), accessed 16 October 2011,

<http://www.sessa.org.za/divisions/heat-pumps/heat-pumps-a-swh-a-comparison/item/heating-geyser-water-a-comparison-between-an-electrical-resistance-element-and-a-heat-pump>

United Nations Environment Program and the Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production 2007(a): *Communicating Sustainability Aspects of Products Using Modern Information Technologies: The Case of the Retailer Sector*. The United Nations, accessed 17 October 2011,

<http://www.unep.fr/shared/publications/pdf/WEBx0007xPA-ComSustMIT.pdf>

United Nations Environment Program and the Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production 2007(b): *Retailers Calendar Exploring New Horizons in 12 Steps towards Long-term Market Success. A Guidelines Manual for Retailers towards Sustainable Consumption & Production* The United Nations, accessed 17 October 2011,

<http://www.unep.fr/shared/publications/pdf/WEBx0006xPA-RetailersCal.pdf>

United Nations Environment Program 2010: *Green Economy: Developing Success Stories*, The United Nations, accessed 15 May 2012,

http://www.unep.org/pdf/GreenEconomy_SuccessStories.pdf

United Nations Environment Program 2011: *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers*, The United Nations, accessed 07 September 2011, www.unep.org/greeneconomy

United Nations Environment Program 2011: *South Africa's Pathway to a Green Economy*, The United Nations, accessed 16 October 2011, http://www.unep.org/greeneconomy/portals/88/documents/advisory_services/South%20Africa.pdf

United Nations Framework Convention on Climate Change Web Services 2011: *UNFCCC and Kyoto Protocol Fact Sheet*, The United Nations, accessed 23 May 2011, <http://unfccc.int/kyoto_protocol/items/2830.php>

United Nations Environment Program Division of Technology, Industry and Economics 2002: *Meeting of the Retail Industry on Sustainable Development*, United Nations Environment Program Division of Technology, Industry and Economics (UNEP DTIE) accessed 17 October 2011, http://www.unep.fr/shared/uploads/events/docs/419_03.pdf

United Nations Environment Program Division of Technology, Industry and Economics 2003: *Shopping for a Better World: Sustainability and Retailing*. United Nations Environment Program Division of Technology, Industry and Economics (UNEP DTIE). Industry and Environment Volume 26 No. 1, accessed 15 May 2012, <http://www.uneptie.org/media/review/vol26no1/unep0103.pdf>

Van Marrewijk M. 2003: *Concepts and Definitions of CSR and Corporate Sustainability: Between Agency and Communion*. *Journal of Business Ethics*, 44, 2-3, 95-105

Van Rensburg A. 1998: *A Framework for Business Process Management*. *Computers & Industrial Engineering*, 35, Issues 1-2, 217-220

Vogel D. 2005: *The Market for Virtue: The Potential and Limits of CSR*. Brookings, Washington

Wagner, Hespeneide and Pavlovsky 2009: *The responsible and sustainable board*. Deloitte Review 4, 60–71.

Walley E.E. and Taylor D.W. 2002: *Opportunists, champions, mavericks? A typology of green entrepreneurs*. Greener Management International, 38, 31 - 43.

Weatherspoon D.D. and Reardon T. 2003: *The rise of supermarkets in Africa: Implications for agrifood systems and the rural poor*. Development Policy Review, 21(3), 333–355.

Westra L. 1995: *The corporation and the environment*. Business Ethics Quarterly, 4, 661-673.

Zadek S. 2005: *Doing good by doing well: making the business case for corporate citizenship*. New York. <http://www.conference-board.org>

Zairi M. 1997: *Business process management: A boundary less approach to modern competitiveness*. Business Process Management Journal, 3(1), 64–80.

Zimmer M.R., Stafford T.F. and Stafford M.R. 1994: *Green issues: dimensions of environmental concern*. J. Bus. Res. 30, 63–74.

9. APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR RETAILERS

A questionnaire was used to survey the information for research in this study, and interviews were either carried out telephonically, via email, or in person, depending on the preferences and availability of the interviewee as some were situated in other provinces in the country. An introduction to the study was given to the interviewees, explaining the background information for the study, the methodology used, and how results would be presented etc.

In line with the aim and objectives of the study, the results of the Questionnaire sent to the five retailers are as follows. Supplemented information retrieved or extrapolated from the respective retailers' most recent Annual Integrated Reports and/ or Sustainability Reports is *italicised*.

Section 1: Definition and elements of inclusion in the term 'Green'

1.1 In your view, what is Green retail in the supermarket sector in South Africa? i.e. What defines/ are the components (for inclusion) of green?

Company A

Sustainability described as 'forward-looking' in essence; reporting is seen as a valuable opportunity to engage with stakeholders. BEE, HIV, AIDS are considered sustainability issues affecting the entire group (Company A Holdings, 2012).

Company B

'Green' is more than eco-friendly. It applies to a wider context as the ability of a company to add societal value.

Sustainability is more than being green for PnP; an approach to become a resilient company incorporating sustainable practice into core activities- positively affecting the bottom line (Company B Group, 2012). Sustainability depends on access to capital (not only financial), like any business. Business is dependent on people, social institutions, natural resources, buildings and infrastructure (Company B Group, 2011). Food retailers operate in entire food system from field to table to disposal (or compost). All people, systems and inputs are involved in the cycle, and all interactions occur in the natural environment (Company B Group, 2011).

Company C

In-store energy efficient lighting and equipment, recycling cardboard and plastic waste, environmentally friendly packaging and reduced use of packaging in products, solar heating use to reduce environmental impacts; rain water harvesting to reduce environmental

impacts. *No use of the word 'Green' in the Sustainability Report 2011. An understanding and appreciation of responsibilities to society and the environment and plays an active, constructive role in areas of operation (Company C Group, 2011).*

Company D

It is the creation of social and environmental health, and well-being of society and planet through all operations across supply chain, operations, people, and consumers. It is the responsibility of continuous environmental performance and creating a sustainable environment and society; creating shared value.

Company E

Broad sustainability focus, impacts are seen as related to supply chain and consumers, inclusive of as many aspects as possible due to wide variety of products, the creation of a triple bottom line using social agenda, commercial and environmental aspects.

Section 2: Green Business Processes

What are the Green practices in effect or in planning in the following Business Processes:

2.1 Procurement Policy

Company A

Preferential procurement guided by B-BEE strategy. Black suppliers support (according to quality and pricing structures) with preference to females. Aims to help small, medium and micro-enterprises (SMME) become efficient suppliers. Unable to meet transformation targets on black suppliers alone and therefore involved in enterprise development to build capacity within the local supplier base (Company A Holdings, 2012).

Company B

A focus on addressing socio-economic challenges through the supply of high quality, affordable food for all whilst providing employment and economic opportunity across the value chain(IAR, 2012). In order to address the national primary social issue of continued high levels of economic disparity in society. Their response is a focus on food affordability and initiatives that create and sustain jobs and small businesses within the supply chain (Company B Group, 2012).

Sustainability focus: providing safe food and expanding sustainable product lines

First SA retailer to commit to sell only sustainably sourced seafood by 2015: MSC certified for wild-caught products; Aquaculture Stewardship Council (ASC) certified for farmed products, or equivalent standards; categorised as "green" by the WWF SASSI; from fisheries or farms engaged in improvement projects (Company B Group, 2011).

Several initiatives: sourcing products from environmentally sustainable farming practices and from socially and economically sustainable small farming operations (e.g. Fairtrade-certified products, and Sustainable Fisheries programme) (Company B Group, 2011).

New partnership with WWF on Sustainable Fisheries that applies an Ecosystem Approach to Fisheries (EAF) (R6.1m contribution from PnP over course of project). All fish suppliers also have a South African Food Safety Inspection Service (SAFSIS) (Company B Group, 2011).

Local product sourcing and promotion particularly in PnP brand; 91% of corporate brands sourced locally (Company B Group, 2012). Food security support (Company B Group, 2011).

Regular audit of key corporate brand suppliers along strict health and safety guidelines(Company B Group, 2012). Work closely with suppliers to promote and expand ethical and sustainable product lines (Company B Group, 2012). "Finest" range of over 200 products assessed for quality, value, availability, carbon footprint (transport and manufacture), and allergens (Company B Group, 2012). 94% of corporate brand suppliers audited on health, safety, and environmental issues (Company B Group, 2012).

A focus on the provision of safe food and expanding sustainable product lines that promotes health (human capital) and good functioning of natural systems (natural capital). Also addresses increasing demand for ethical and green products, sustains viability of supply and drives innovative thinking and action (Company B Group, 2011). Green Range house brand: first range in 1995; manufactured according to Canadian Enviro-Performance standards: endorsed by government's Indalo Yethu initiative to promote green and eco-friendly practices; no harmful chemicals and non-toxic and corrosive; biodegrade within 14 days; recyclable packaging; no animal testing(Company B Group, 2011). Fairtrade products: commitments to sell more products; South Africa is one of the largest producers of Fairtrade-certified products globally (Company B Group, 2011). PnP Organic range; commitments to encourage farming that supports environmental health, food production, and nutritional food while still keeping prices affordable; 100% independently certified (EU/ USA/ Japanese Standards) (Company B Group, 2011). Organic Farmer and Retailer programme between Company B, Company C, Company A, and the Department of Trade and Industry to facilitate organic produce emerging farmers (Company B Group, 2012).

Sustainable packaging: several pilot programmes to reduce packaging, encourage recycling, and use better materials. Successes have been integrated across several product lines. Data management systems for monitoring (Company B Group, 2011).

Sustainability Focus: building a resilient supply base: Work closely with suppliers to ensure sustainability of supply chain, focusing on enterprise development and supporting the agricultural sector through market access entry for emerging farmers (Company B Group, 2012).

Food security impacts on their procurement strategy and the security of the supply chain, and on responsibilities for the health of natural systems that support the supply chain (Company B Group, 2011).

A focus on building a resilient supply base provides market access for producers and a support system for small-scale suppliers (social and financial capital). Furthermore this

supports existing supply chain initiatives, consolidating supply chain relationships (Company B Group, 2011).

Investing in small farmers and emerging entrepreneurs; securing a more diverse local supplier base whilst growing communities and customers (Company B Group, 2011). Development of small suppliers for access into the markets (not only PnP but the retail industry at large) is a goal- as this is the most challenging area for emerging farmers (Company B Group, 2011). Linking enterprise development to our supply chain: to build and diversify the supply base and so increase its resilience and national governmental agenda; meet BBBEE regulatory requirements and internal targets. (Company B Group, 2011).

The Foundation manages enterprise and small scale-farmer development through Company B Enterprise Development Fund and the Small Business Incubator (launched in 2010) (Company B Group, 2011). Company B Small Business Incubator provides ongoing mentorship to >50 small businesses. 2012: 66 Small farmers and businesses in the Small Business Incubator (Company B Group, 2012). Enterprise Development Foundation has provided 33 emerging entrepreneurs to gain access to markets through the stores in 2012(Company B Group, 2012).

Communication with suppliers including two significant engagements annually. Supplier development workshops (216 supplier attendance in 2010), and supplier symposiums on food safety (Company B Group, 2011). SR, 2011) Supply chain risk assessment to quantify the possible impact that external environmental trends could have on business- including limited natural resource impacts, pollutants, and increased green house gases (Company B Group, 2012). Suppliers need to be resilient to changing climatic conditions and shifting consumer demands; requires understanding of supply chain risks and opportunities (Company B Group, 2011). Formal assessment of supply chain practices to build a management framework for sustainable farming practices (Company B Group, 2011).

Sustainable Farming Practices: aimed at long-term soil improvement and stabilisation; optimum sustainable yield; promotion of human health; ecological balance practices; natural resource conservation. Initiatives include: Global GAP principles, working through challenges and engaging with suppliers (Company B Group, 2011).

Company C

No set practices in sustainable procurement; the sustainability of suppliers is considered- their environmental impacts, targets or participations (e.g. Carbon Disclosure Project). Preferential procurement of local goods and industry, coupled with consumer expectation of quality, value, price. BBBEE credentials for all brand and most non-brand suppliers. SASSI program- also used to align the entire brand products with best practice guidelines for sustainable seafood (Company C Group, 2011).

Company D

Preferential procurement of small- medium black-owned businesses. Part of BBBEE Codes of Good Practice and Transformation. Group's Enterprise Development (ED) program remove supply chain entry barriers for small-medium black and black women enterprises. A commitment to build sustainable supply chains is maintained in the efforts to transform them.

Group's Code of Business Principles binds and assesses (including environmental impacts of) suppliers, service providers, and franchisees

Key initiatives in environmental component of programme: organic and free-range products, healthy eating choices, protection of biodiversity, animal welfare, water management, waste management, the reduction of packaging:

Marine Stewardship Council (MSC)-certified fisheries; local SASSI programme; Company D Fishing for the Future initiative guarantees responsibly sourced, legally caught, fully traceable seafood (2008)

Sourcing recycled or independently certified (e.g. Forest Stewardship Council FSC) wood

Farming for the Future programme and Standards (with WWF) - shifting conventional farming practices to environmental ones; International Globalgap farming practices. Sandveld sustainable potato farming solution in progress. Wine farmers in the Cape Floral Kingdom members of the Integrated Production of Wine (IPW) and Biodiversity and Wine Initiative (BWI)

Reduced pesticide and fertiliser use; A selection of certified organic produce suppliers, Fairtrade certified coffee, and free-range (all eggs); Ethical trade: suppliers must be signatory to Company D's Clothing Brand Type 2's Code of Labour Practice (that follows International Labour Organisation Conventions)

Selling only badger-friendly honey; Animal Welfare Policy to not sell threatened species products or by-products; Predator-friendly farming support; Close working relationship with suppliers, universities, the Dept of Agriculture's research farms and expertise (Conservation International South Africa, the Endangered Wildlife Trust(EWT), Landmark Foundation); Anatolian sheepdog adoption programme

Animal Welfare Code of Practice (NSPCA-approved), and no animal testing and cruelty or use of real fur. Beauty Without Cruelty (BWC) approval for cosmetics and toiletries. Earth-Friendly range of cleaning and personal products; Sustainable fibre use, with targets of using 12% in clothing products by 2015 (and non-mulesed wool)

Water usage reductions and water waste management measures in the supply chain. Water and energy –saving guidelines; Agricultural water reduction work with the Global Compact and German Development Agency (GTZ); Partnership with the WWF Water Balance Programme, in association with govt's Working for Water, that encourages corporate water-neutrality by eliminating water intensive alien plant species and releasing enough water into the South African system to off-set Company D's annual water usage; Work with suppliers to meet a target of 60% of clothing products having energy or water savings; Fabric suppliers also adhere to strict standards; Education of the supply chain e.g. water conservation

Packaging reductions and management: 45% of product lines contain recycled materials (reducing virgin materials); restricting materials to those recyclable locally and 85% recyclability of food packaging, influencing industry to develop sustainable materials. Post-consumer recycled plastic used in food packaging (30% recycled Polyethylene Terephthalate (rPET) introduced). Use of FSC-approved raw materials. >95% of food lines with symbols to help customers recycle. Sourcing of recyclable paper shopping bags (for

Company D Company D's Clothing Brand Type 1 and Company D's Clothing Brand Type 2) supplied by Classique Bags. Slow progress on food packaging reductions (resulting damage and increase in waste of the product) therefore focusing on recyclability of packaging and use of recycled content in packaging.

Support of sustainable Palm Oil production through membership to the global Roundtable on Sustainable Palm Oil (RSPO) (principles and criteria), and purchasing Green Palm certificates contributing to incentivising Indonesian and Malaysian producers to become sustainably certified (Company D Holdings, 2012).

Company E

Accountability Theme 1: Enable Sustainable Supply and Consumerism –positive influence in society through supply chain decisions

Direct Farm Program: support and integrate emerging farmers into supply chain. Food-producer security and job creation. International group India experience: programme provides access to services (mentoring by larger commercial farmers and training by NGO partner Technoserv). Pilot programme in Ofcalcao, Limpopo with 40 small farmers- other communities identified in SA

Global Ethical Sourcing: to partner with private label, direct import and non-branded merchandise suppliers for adherence to international group Supplier Standards - to positively impact global supply chain practices by raising own standards and creating partnerships for innovative solutions.

International group Ethical Sourcing Programme (2013) for sourcing of private, non-branded and imported merchandise and: improve global factory workers working conditions; support factory social and environmental conditions; and empower workers through supplier development and women's empowerment initiatives

Primary Packaging Rationalisation: Informed by International group's well-known packaging rationalisation expertise, Company E's first product packaging workshop (supported by Astrapak, Packaging Council of South Africa (PACSA) and South African Plastic Recycling Organisation (SAPRO) for a framework to identify resource efficiency opportunities and improved recyclability of private label product packaging. Plans to expose all buyers to the workshops, and a private label packaging rationalisation audit within each Division.

Local Supplier Advocacy: share knowledge with local suppliers and facilitate voluntary high environmental and human rights standards. A combination of self-assessment surveys, issue-specific workshops, random data verification site visits, and comparison of data. 750 suppliers' participation since 2009 launch. 2012 focus on palm oil procurement practices of private label suppliers, fishery management practices of seafood suppliers and integrated environmental planning commitments of strategic suppliers. 2013 plans to add a sustainable agriculture initiative

Eco-label Advocacy: promote independently verified eco-labels or equivalents. No enforcement of eco-labels as a procurement screen, but to proactively facilitate interaction between eco-label owners, buyers and suppliers for awareness of the benefits. Eco-label awareness workshops, prioritised energy efficiency, marine stewardship and forestry

stewardship are immediate focus areas. Disappointment in own demonstrable progress in the consistent application of energy efficiency labelling standards on the major appliances sold in-store (Company E Group, 2012).

2.2 Distribution Network and Systems

Company A

Packaging and waste initiatives: Re-usable roll-tainers to replace wooden pallets; reduce shrink-wrap material for stabilising product during transportation; damaged goods reclamation centre (Company A Sustainability Report, 2012).

Company B

New 'green' Longmeadow Distribution Centre grocery extension and Nicol store

Less harmful refrigerant gases used

Optimising logistics: Supply chain optimisation for resource and process efficiency. Longmeadow Distribution Centre optimised the logistics network by: centralised distribution and data management and centralising distribution.

A centralised distribution system reduced the environmental footprint and GHG emissions by reducing: volume of plastic products in supply chain; truck miles; packaging; wash plant's energy consumption

Packaging Initiatives: recycled materials in different packages; in 2011 all packaging material in Group brand products contain a recycling substrate logo. PETCO partnership to pilot increasing recycled plastic in PET packaging and manufacturers to label packaging with recycling logos (Company B Group, 2011).

Company C

Consideration of more energy efficient vehicles and efficient transport planning. Factors under consideration are driver training to reduce fuel consumption and the location of distribution centres and stores.

Initiatives to reduce impacts:

36.5% of emissions from Distribution (fleet). A 5% ratio of biodiesel use in delivery vehicles (Eastern and Western Cape) Fleet management: resource conservation focus through route determination. Transport manager for driving efficiency and driver trainers for fuel efficiency. New fleet vehicles meet the minimum Euro 3 emission standards

Environmental design of centres; energy management plans, advanced lighting technology, new technology and processes in refrigeration plant and battery charging area designs.

Energy saving measures (low efficient fittings and bulbs to timers on all equipment) in all centres

Water-saving initiatives- truck wash recycling system. Plans to participate in the Water Disclosure Project in 2013 (Company C Group, 2011).

Company D

Sustainable transport strategy

Sustainable Transport Strategy and initiatives: route optimisation project (with Imperial Group) resulting in travel and cost reductions; fuel project using 5% recycled cooking oil added to fuel mix in 95% of trucks; fuel consumption reductions using Euro 5 technology on a trial basis (with Imperial) using Bluetec technology; Ecofridge project using nitrogen refrigeration in the fleet; reusable plastic lugs for transport in place of cardboard boxes; transit packaging ; environmental design of the Midrand Distribution Centre. Only 0.1% of food is air freighted where local alternatives are not available

Water usage management at distribution centres (50% relative reduction by 2015)

11% waste-to-landfill from distribution operations (0% target by 2015)

Energy conservation and awareness at distribution centres.

A cold chain that extends product life, and prevents growth of pathogens on temperature-sensitive products (Company D Holdings, 2012).

Company E

International group experience used in the supply chain and logistics strategy, including the roll-out of Regional Distribution Centres (RDCs)- resulting in RDCs having strict physical controls and efficiencies.

Continual refurbishment of older stores, building new stores and Distribution Centres

Supply chain development through RDCs is a key initiative for overall business efficiency, reducing costs and improving stock levels.

A Strategic Supply Chain Integration Department for RDC implementation oversees supply chain-related processes and systems by aligning and optimising across merchandise, logistics and store operations, with customer needs central to all. Suppliers are being integrated into the RDC network- that has benefits.

Within the Accountability Theme 2: Minimise the Group Environmental Footprint

Secondary Packaging Recycling: specifically board and plastic waste generated in stores and distribution centres. Objectives of zero paper, board, plastic secondary packaging waste to landfill through store-based recycling.

Following International group input, a waste management practices survey of all South African stores identified opportunities to: rationalise the recycling service providers, increase participating stores, and improve waste disposal data

Water efficiency: Three RCDs fitted with water efficiency fittings (low volume showers and taps) with estimated 40% reductions (Company E Group, 2012).

2.3 Store Operations

Company A

Water consumption: water-saving initiative investigations for one of the distribution centres. Plans to only use 'water-wise' indigenous plants in new facility gardens. Plans to enhance water monitoring programme in line with the functionality enabled for electricity consumption across its supermarkets in the next year (Company A Sustainability Report, 2012)

Electricity Consumption: Energy monitoring system in majority of South African supermarkets for purposes of developing energy-efficient initiatives and technologies (with approval for seven of the 28 examined)

Smart refrigeration and tele-maintenance systems in supermarkets. Plans to establish centralised monitoring system to optimise efficiency of cold-chain and increase efficiency and reduce waste (Company A Holdings, 2012).

Company B

Development of eco-friendly stores and climate change education (Company B Group, 2012).

Minimising Waste: store weekly monitoring to ensure reduction of waste generated in operations. Waste management service providers work to increase recycled waste than that to landfill. Waste recycling programme roll-out completed in 2011. Over 6,000 tonnes of waste recycled. Recycling facilities in all corporate stores (Company B Group, 2011).

Energy Management: daily in-store energy consumption measurement and reporting for improvements. Replacement of fluorescent fittings with electronic ballasts with average monthly savings of 20%. Employees engaged in energy efficiency plans and energy consumption and intensity has reduced. Several energy efficiency initiatives are underway (Company B Group, 2011).

Managing Chemicals: Overall reductions in harmful chemical use and use biodegradable cloths in cleaning, and special standards for food areas. In 2011 all contracted cleaners encourage to reduce chemical use. The delivery of bulk chemicals to stores has been reduced by specifying concentrated products and reduced use and efficacy via dosage control mechanisms and application training (Company B Group, 2011).

Refrigeration: Reduced use of Freon gas in air conditioning and refrigeration- reducing Freon-associated GHG's (Company B Group, 2011).

Flagship Green store on Nicol Drive in Johannesburg:

Refrigeration and Energy Reduction: Intelligent refrigeration and air conditioning system – a thermal energy storage system creating ice at night when demand and tariffs are low and using it during the day for air conditioning cooling. Resultant energy demand reductions by 40% and excess heat created heats a 1600l water tank. Natural gas used (3rd store with this) for refrigeration plant (Company B Group, 2011).

Infrastructure and Traffic: nearby traffic lights to store are solar-powered and a fourth lane added to the nearby highway (Company B Group, 2011).

Vegetation and Carbon Reduction: Indigenous vegetation used in landscaping reducing water demand. 190 trees planted (Company B Group, 2011).

Daylight Harvesting: Integrated energy efficiency strategy using heat-dissipating glass with timber louvers for thermal control and a skylight to diffuse day light (reducing demand for up to 80% of the day) 100kW solar-powered system provides electricity- saving 20% of energy requirements (Company B Group, 2011).

Water: water conservation integrated into store design with 6000m² roofing covering the complex for rainwater harvesting with 420 kilo litres. Used for irrigation and for evaporative cooling system of the fridges- annual savings of 30% on usual demand. Two attenuation (holding)dams built in the area to clear pollution from storm water and manage its release so as not overburden the Jukskei water system during flood cycles (Company B Group, 2011).

Construction Methods: The 4000 tonnes of rock and earth (granite and subsoil) removed in construction was reconstituted to provide building material and infill for the industry (Company B Group, 2011).

Company C

In-store energy efficient lighting and equipment

Recycling cardboard and plastic waste initiatives

Environmentally friendly packaging and reduced use of packaging in products *and plans to work with suppliers on food packaging (Company C Group, 2011).*

Solar heating use to reduce environmental impacts

Rain water harvesting to reduce environmental impacts

Provision of environmental leadership to Company C retailers

The group's environmental policy is implemented across the scope of the organisation, through the operational processes to reduce negative environmental impacts and leverage organisational competencies for positive environmental contributions (Company C Group, 2011).

Company D

Energy and water-saving initiatives; in-store waste management; sustainable building strategy; their own green building rating model (guides the building of new stores or retrofitting of old stores)

In-store awareness campaigns and communication (e.g. For the Love of Water FLOW movement in National Water Week). In-store awareness and education on sustainable

procurement of seafood. Advertising and in-store communication. HIV/AIDS awareness within stores with some having committees arranging awareness activities

Employee GBJ Champs Programme to grow sustainability across store network. Stores are encouraged to support local projects, the funds raised of which are then matched by the Company D Trust. Stores have their own community-giving programmes distributing surplus food and clothes to local charities

CFL light bulb and battery recycling facilities in-store. Lighting: automated lighting

Water reduction and water measurement system (online metering in all stores)

Refrigeration: stores retrofitted with energy-saving technologies, CO₂ refrigeration installations, Ecofridge installations. Efficient refrigeration and air-conditioning technology. Cold-chain maintained (this was in distribution though so maybe not needed here)

Recycling of all store equipment (including food trays) Hangers recycled through Hangerman. Trolleys and shopping baskets made from recycled material. 30% of signage made from recycled material and chemicals in production are water-based. Glass, paper, plastic, cardboard recycling at Company D Food stops and Engen convenience stores. Composting of organic waste at Company D Head Office

Paper printing solution at head office and "Follow Me" feature requiring an access card to print. 'Treeathlon' competition between business units to reduce paper. Store card and loan statements sent via email (75000 accounts converted to e-statements in 2012)

Green Buildings: platinum status for Nicolway store, 24 total sites meet Green Store Status with plans to roll out model. Features of the green model: natural ventilation and cross-ventilation; energy-efficient lighting; solar-powered water heating; reuse heat generated by plant and machinery to heat buildings in cold periods of year; LED lighting for exterior signs; CO₂ refrigeration system; underfloor heating in food market using waste heat and heat pumps and hear reclaim system for food market and cooling; skylight (natural lighting); reductions in spotlighting and fluorescent lighting; grey water recycling system; dual flush toilets; electronic pulse meters installed in water meters; customer recycling facilities; cardboard shelving and bulkheads

Clean energy projects in proposal stage with Solar pilot at Head Office. Solar heating used to supplement heating in green stores. Energy reductions through energy efficient lighting, refrigeration, and store design (Company D Holdings, 2012).

Company E

Each Company A Warehouse Type Retail Store store sponsors and supports initiatives within their vicinity, building relationships with recipients. Specific focus of nutritional support, education and environmental sustainability.

Company E Energy-saving initiatives: approx. 700,000KWh/month saved across new stores by: replacing jumbo freezers with efficient glass door freezers; high speed vertical doors with insulation and temperature control (also improves cold chain efficiencies); technology that

reclaims condensate refrigeration unit water and re-channels refrigerant gas heat for use in building's hot water systems; retrofit trading floors for natural light; lighting controllers to switch off trading floor lights when not used; replacing metal hydralite fittings with LED high bay light fittings (58% more efficient). Evaluation process with Eskom on energy-saving upgrades for existing stores and proposal will move to Board for approval. Recycling dry waste generated income of R1.8m

Post-consumer Waste Recycling: piloted regionally-based post-consumer in-store waste recycling schemes that including compact fluorescent light (CFL) and battery waste collection points at certain stores. Indifference in customer support of these schemes and likely to discontinue in favour of alternatives e.g. a partnership between Company E Building Type Retail Store and Amalgamated Appliance Holdings, pilot testing a used small appliance customer take-back and recycling initiative. No customer paper, board and plastic recycling schemes, but accept and recycle small volumes of packaging waste returned by environmentally aware customers.

Consumer E-waste Recycling: post-consumer e-waste recycling schemes in metropolitan areas. 4th year partnership with Fujitsu-Siemens for consumer e-waste disposal. Facilities at 10 Company A Warehouse Type Retail Store stores with 98% of materials diverted from landfill. Exploring opportunities to involve hi-technology brands

Eco-label Advocacy: Disappointed in demonstrable progress in the consistent application of energy efficiency labelling standards on major appliances sold in-store

Consumer Empowerment: for consumers to frequently make responsible consumer choices. In-store customer demand-driven environmentally-friendly product promotions (e.g. recycled office paper etc)

Energy Efficiency: in line with format-specific energy intensity benchmark ranges. International group is instrumental in this area of focus. A historical barrier to energy efficiency at Company E has been the indifferent business case associated with legacy store energy efficiency retrofits (e.g. specialised skylights to reduce on electrical lighting). International group procured affordable skylights and enabled a Company A Warehouse Type Retail Store legacy store retrofit programme, with Company A Warehouse Type Retail Store Woodmead as the first.

International group also reinforced how energy savings depend upon accurate electricity consumption measurements and independent metering should not be mandatory. All stores now have independent energy tracking with most progress by Company E Building Type Retail Store consolidating independently metered data centrally, enabling informed legacy store energy-saving initiatives

Company A Warehouse Type Retail Store's five newest stores, are on average 25% more energy efficient than their comparable legacy stores., Company E Hypermarket Retail Type Store's Foodco stores have solutions such as advanced energy efficient refrigeration units for electricity consumption reductions.

In line with International group's aims to be supplied by 100% renewable energy by 2025, Company E has revived an investigation to identify opportunities for renewable energy options

Secondary Packaging Recycling: specifically board and plastic waste generated in stores and distribution centres. Objectives are to have a situation of zero paper, board, plastic secondary packaging waste to landfill through store-based recycling. International group advised a waste management practice survey to identify opportunities to rationalise recycling service providers, increase participating stores and improve waste disposal data accuracy

Water Efficiency: to supplement nurseries (at Company E Building Type Retail Store) and landscaping irrigation requirements. Water harvested at 34 stand alone stores, including condensate harvesting. Condensate harvesting collects condensate from store fridges and air-conditioning units- using less water for refrigeration and cooling. This integrated solution also improved refrigeration and cooling energy efficiency. Plans to retrofit selected stores with condensate harvesting technology and RDCs with water efficient fitting (low volume showers etc)

Regulatory inspection tracking mechanisms in all stores to reduce quality-related claims (Company E Group, 2012).

2.4 Human Resource Practices

Company A

Transformation Program:

Broad-based Level 4 (2011: Level 6) contributor

Equitable Ownership

Employment Equity; Committee for this that updates plans every five years

Skills development (20 accredited learning programmes and plans to form partnerships with selected universities of technology and FET colleges)

Preferential procurement

Enterprise Development – aims to create sustainable supplier base through supplier chains and to empower local communities. Small supplier Initiatives: Freshmark suppliers (supports B-BEE) and Homemade Initiative (local cottage industry support)

Ownership, development and investment in shopping centres in disadvantaged communities and rural areas

Development Trust to advance B-BEE by contributing to enterprise and socio-economic development programmes (the Kwanogaba Shopping Centre Limited and the Mossel Bay Enterprise Trust) (Company A Holdings, 2012).

Company B

Sustainability Focus: Empowering our people:

Employee engagement: a range of issues from sustainability, labour issues, personal wellness. Employee recognition programmes and awards. Four main employee engagement platforms, Company B- Patter magazine, Fresh Connexion video communication, Junxion employee website and Memeza in-store radio. 2011 first Staff Satisfaction and Engagement Survey

BEE and EE through Diversity Management Programme, Trainee Manager Development Programme redesigned, New Performance Management System (2010), R 71.8m to training and bursary investment, increasing sustainability store awareness

Training and skills development: key priority impacting on talent and transformation. Employee training includes Retail Management Programme, Adult and Business literacy and new customer courtesy courses. 140 essential learning processes and 270 development opportunities/ programmes across the company, including local and global opportunities in areas like Strong Leadership and Effective Management

Employment Equity and Empowerment: Level 8 BEE contributor. Dedicated transformation director. Initiatives supported by business model and Franchise Academy upskills SMME owners (Company B Group, 2011).

Company C

Employee education on environmental issues and factors that threaten the sustainability of business and society. This is seen as important in identifying opportunities in this area. Pursuit of these initiatives must make business sense and add to the value of the organisation whilst creating positive environmental impacts.

Human resource strategies with strong bias to employment equity and transformation, with group training initiatives aimed at this. In 2011, 3.05% of total payroll spent on skills development

Transformation:

- 1. Diversity and equal opportunity. Sustainable business requires transformation and positive equity and black economic empowerment, and is a group imperative*
- 2. Broad-based black economic empowerment (BBBEE) supporting BEE Act, No. 53 of 2003, and BEE Codes of Good Practice, Level 6 contributor (BB rating) with 60% recognition level, with improvements planned*
- 3. Ownership: The Company C BBBEE Employee Trust and BBBEE Retailer Employee Trust*
- 4. Enterprise Development. New retail store creation is an important objective and new BBBEE entrant and development contributes to transformation. In September 2011, 192 black-owned stores (2010: 167)*

Some training programmes: Management Induction Programme trains new retailers; Retail Management programme ensures consistent, competent supply of experienced managers;

Annual Young Managers Conference; International Company C Young Managers Conference; Company C Internal Organising Committee praises South African delegates

5. Preferential procurement: sourcing of local goods and local industry support. Acknowledged importance of BBBEE preferential procurement and credentials for all brand and most non-brand suppliers (Company C Group, 2011).

Company D

As part of the business case for sustainability, we see that the value that this programme brings for employee retention, innovation and enthusiasm. It feels good working for a company that is “doing the right thing”

Transformation, specifically BBEEE, is seen as a policy of sustainable empowerment, under the Social and Ethics Committee governance. BBBEE score of 72.93 and Level 4 Contributor status. BBBEE Employee Share Ownership Scheme disburses financial benefits to staff participants (2012: 7157)

Management Control focus on representation of black non-executive directors and senior executives through succession planning and talent management

Employment Equity Act diversity of workforce and compliance within all business units via diversity committees. Continuous improvement of Integrated Performance Management (IPM) sees BBBEE and/ or transformation included in individual performance goals

Skills Development Training focused on having most training initiatives accredited, better delivery and management of the Skills Plan, increased employees on learnerships (2012: 1011), stringent individual performance management

Preferential Procurement; use of the Enterprise Development Programme as a tool to remove barriers to supply chain entry for small-medium black and black women-owned enterprises as part of commitments to sustainably transform the supply chain (Company D Holdings, 2012).

Company E

Company E Discount Divisions aims to have a strong leadership pipeline. The Talent department heads initiatives in leadership development. Recruitment processes aim to balance education, exposure and experience of new employees. All 503 employees retrenched in the international group/ Company E merger were offered alternative employment in the Group.

BBBEE score of 72.8% for the Group

Company E has internal training and development initiatives for productivity, customer service and operational efficiencies. Internal skills audit of lifting machine operators using assessors accredited by the Transport Education & Training Authority (SETA) for specialised training

Transformation: four focus areas: recruitment and selection from designated groups; training and development of black employees; affirmative action to source and identify talent; and employment of people with disabilities. Diversity training is key in the transformation for management and employees

Company E Building Division: drives culture in the organisation using the Builders Formula for Success, identifying the behaviours, practices and business principles that drive business success and those that detract from it. Expressed graphically and therefore can be represented visually and verbally, and fully integrated- including into the international group 3 Basic Beliefs.

Staff is encouraged to be tested for cholesterol, HIV, diabetes and high blood pressure through the Impilo programme. More than 370 staff underwent voluntary HIV testing and 58 employees are currently on antiretroviral treatment. An employee-assistance programme is being launched in September 2012 providing advice and support for psychosocial, legal and financial well-being.

A pipeline of future business leaders insurance requires, management and leadership development as a key focus area of Company E Building Division's education programme. Senior staff attend various programmes by Company E's Corporate University. 482 staff from junior non-supervisory to senior management attended financial management training and 83 managers attended an Interaction Management course, the primary leadership training for managers. Training and development of previously disadvantaged staff is prioritised. Supervisory Development Learnership programmes ensure supervisory level advancement.

Company E Cash Division: up-skilling and training for staff; 683 employees attended courses (basic retail training to soft skills development and diversity awareness, to health-and-safety and information-technology). Offered adult Basic Education and Training and 284 learnerships granted to black staff.

Culture awareness programme in all stores. A mentoring programme, and in 2012 nine previously disadvantaged graduates promotions to challenging roles. In 2013, the first Cambridge Food learnership grants will train 80 unemployed people in basic retail skills.

A Company E Cash Division HIV/Aids programme for stores in rural areas(with high HIV infection rates). HIV-positive Company E Cash Division employees on a HIV management programme. Voluntary counselling and testing services are offered to all employees, 14.3% chose to be tested.

Functional forums: a Human Resources Forum for management of skills and the procurement of resources and services required to support key Group wide activities.

Work with suppliers to improve their BBBEE credentials for transformation into the supply chain (Company E Group, 2012).

2.5 Consumer Education

Company A

Understanding of contribution consumer education makes towards helping consumers understand their rights and obligations, and responsibility in assisting them in making better purchasing decisions

'Consumer Sense' information leaflets on various topics. Sponsorship of health articles in Minimag of some customer education programmes by South African National Consumer Union (Company A Holdings, 2012).

Company B

SASSI/ WWF Consumer Seafood Pocket guide cards and Posters in-store (Company B Group, 2011). Ongoing commitment to climate change education (recognised in the Climate Change Leadership award) (Company B Group, 2012).

Company C

Critically important, and not just a 'good PR job'. An understanding of potential for consumer education to create change in society that can impact households positively in conscious environmental behaviour, and also thereby create trust in a retailer's brand.

Commitment to consumer education. Children Conference on Environment (120 children from S.A and other countries)

Environmental advertising campaigns. Cardboard and plastic recycling initiatives

Social educational awareness programmes (Company C Group, 2011).

Company D

Consumer education is said to be important; allowing for 'better choices'. Education throughout all communication of social media, in-store plasma TV's, in-store decor, TASTE magazine, etc.

Occasional educational campaigns e.g. a reusable bag campaign, a sustainable fishing campaign for the blue Marine Stewardship Council eco-label

Employee education, particularly at a store level. 'GBJ Champs' programme, identifying one Champ per store who provides a communication channel to store colleagues around the Good Business Journey

Consumer Awareness Campaigns e.g. MSC nationwide campaign. Growing customer engagement on sustainability issues with in-store awareness campaigns, increased social media platform use, TV relationship (e.g. 50/50). Education through campaigns: water conservation e.g. FLOW, energy conservation, Facebook campaign with Red Cross and Company D's Clothing Brand Type 2, 50/50 inserts and 3Talk appearances

Eco-labelling for consumer education on seafood etc

Social education and awareness (food security and education) through the EduPlant, Making the Difference and MySchool programmes. HIV/ AIDS awareness with stores and head office, some stores having their own committees to arrange HIV/AIDS awareness activities. Support for national campaigns e.g. World AIDS Day and the 16 Days of Activism Campaign For No Violence Against Women and Children, breast cancer and substance abuse (Company D Holdings, 2012).

Company E

Environmental specifications of products in advertising pamphlets for more informed consumer choices.

E-commerce planned for 2013 to create an online retail store to enable and enhance the use of social media and digital direct marketing vehicles and align product marketing to consumer needs

Accountability Theme: Enable sustainable supply and consumerism: : a positive role in society through supply chain decisions.

Global Ethical Sourcing: partner with private label, direct import and non-branded merchandise suppliers to make sure of adherence to International group Supplier Standards. Consumer exposure to this on labels. (Company E Group, 2012).

Post-consumer Waste Recycling: regionally-based post-consumer in-store waste recycling schemes. Including compact fluorescent light (CFL) and battery waste collection points at certain stores. Indifference in customer support of these schemes in pilot studies and likely to discontinue in favour of alternatives e.g. a partnership between Company E Building Type Retail Store and Amalgamated Appliance Holdings, pilot testing a used small appliance customer take-back and recycling initiative. No customer paper, board and plastic recycling schemes, but accept and recycle modest volumes of packaging waste returned by environmentally aware customers.

Consumer E-waste Recycling: post-consumer e-waste recycling schemes in metropolitan areas. 4th year partnership with Fujitsu-Siemens for consumer e-waste disposal. Facilities at 10 Company A Warehouse Type Retail Store stores with 98% of materials diverted from landfill. Exploring opportunities to involve hi-technology brands

Eco-label Advocacy: Disappointed in demonstrable progress in the consistent application of energy efficiency labelling standards on major appliances sold in-store

Consumer Empowerment: for consumers to frequently make responsible consumer choices. In-store customer demand-driven environmentally-friendly product promotions (e.g. recycled office paper etc). Eco-wise brand launched in 2008 for consumer awareness about more environmentally friendly product options.

Marketing campaigns; energy-saving or socio-economic initiatives

2.6 Technology and Management Practice

Company A

Smart refrigeration technology (used to improve electricity consumption)

E-learning: a piloted SAP Learning Management System in 2011 to convert 10-15% of workshop-based learning to e-learning modules. Freshmark's first Produce Buyer e-learning training program was planned for launch in August 2012 (Company A Holdings, 2012).

Company B

In the process of installing new refrigeration technology (Company B Group, 2012).

Flagship Green store on Nicol Drive in Johannesburg:

Refrigeration and Energy Reduction: Intelligent refrigeration and air conditioning system – a thermal energy storage system creating ice at night when demand and tariffs are low and using it during the day for air conditioning cooling. Resultant energy demand reductions by 40% and excess heat created heats a 1600l water tank. Natural gas used (3rd store with this) for refrigeration plant (Company B Group, 2011).

Company C

A cold chain 'best practice' developed for food safety

Euro 3 emission standards vehicles and route determination

Energy management plans in distribution centres

Advanced lighting technology

New technology and processes used in the design of refrigeration plants and battery charging areas

Developmental focus continued in technical, supervisory and management competencies that underpin sustainability (Company C Group, 2011).

Company D

Good Business Journey drives investment into efficient and green technology in real estate, logistics and supplier networks as part of green economy contributions

More efficient refrigeration and air-conditioning in stores (9 CO2 refrigeration installations, 4 Ecofridge installations, 67 stores retrofitted with energy-saving technologies)

Energy reductions through energy efficient lighting, refrigeration, and store design

Store card and loan statements sent via email (75000 accounts converted to e-statements in 2012)

Fuel consumption reductions using Euro 5 technology on a trial basis (with Imperial) using Bluetec technology (Company D Holdings, 2012).

Company E

Latest energy efficiency technologies in our lighting and cooling systems at stores and warehouses

Most cathode ray tube screens replaced with energy efficient LCD screens

Gauteng RDC lighting operates with motion detectors

Company E: technology reclaiming condensate water from refrigeration units and heat generated by refrigerant gas channelled for use in the buildings' hot water systems (also preserves frozen stock more efficiently).

Company E Building Division: in-store energy monitoring technologies

Functional forum for Technology, Information and Process (TIP) for management of skills and the procurement

of resources and services to support key activities in this area

Water Efficiency: Condensate harvesting at Company A Warehouse Type Retail Store collecting condensate from store fridges and air-conditioning units, using less water for refrigeration and cooling. This integrated solution also improves refrigeration and cooling energy efficiency. Plans to retrofit selected Company A Warehouse Type Retail Store stores with condensate harvesting technology. (Company E Group, 2012).

2.7 Marketing

Company A

Only consumer education material listed above based on social issues- i.e. free topical leaflets

Company B

Mostly promotional marketing, and marketing through sustainability eco-labels, and consumer education

Company C

Very aware of green-washing and the temptation to create impressions of responsible environmental performance. For this reason, companies should be involved in green initiatives because they make sense and not because it looks good in an advertisement

Social educational awareness programmes; Children Conference on Environment (120 children from S.A and other countries)

Environmental advertising campaigns; Cardboard and plastic recycling initiatives (Company C Group, 2011).

Company D

Allocated green marketing employees for the communication of the Good Business Journey with customers; weekly slots on social media for Good Business Journey news and communication; dedicated in-store campaigns and activations; regular slots on local environmental TV programmes 50/50 and 3Talk Green Show to market the Good Business Initiatives

Ongoing electronic and personal engagement, interviews, press releases, publications (Company D Holdings, 2012).

Company E

Mostly promotional marketing, and marketing through sustainability eco-labels, and consumer education

Section 3: Sustainability

3.1 What are the company's sustainability objectives (overall)?

Company A

Pragmatic approach to efficiency to maintain consistently low prices. Sustainability issues that affect the Group as a whole (for example, BBEE, training and HIV/Aids) are the responsibility of Group senior management and are managed centrally and implemented across all divisions (Company A Holdings, 2012).

Company B

Integration at all levels and link sustainability projects to business strategy.

Focus areas: Providing safe food and expanding sustainable product lines; Building a resilient supply base; Empowering our people; Supporting communities in their contribution to change; Working for a clean and healthy environment; Enhancing governance and accountability

Through the use and building of each one of these five capital stocks: Financial and manufactured capital; Human and social capital; Natural capital (Company B Group, 2011).

Company C

Reduce direct environmental footprint as much as is practical and economical

Drive innovation in house brand to reduce the environmental impact of their full life cycles

Engagement and collaboration with suppliers and retailers to assist them in minimising their environmental footprints and ensure ethical and environmentally sustainable business practice

Raise awareness and improve education around sustainability issues within the organisation, their retailers businesses, and communities

Enabling previously disadvantaged or marginalised players to enter and participate sustainably in their end-to-end value chain

Play a small but impactful philanthropic/ social role in communities

Developmental focus is placed on technical, supervisory and management competencies that underpin sustainability (Company C Group, 2011).

Company D

Address sustainability impacts of operations, life cycle of products, and the use of products by consumers. Achievements in six key focus areas: sustainable farming, water, energy, waste, social development, and transformation

Three year sustainability vision to be recognised as leaders in the retail industry for sustainability initiatives and journey (Company D Holdings, 2012).

Company E

The three key Accountability Themes of Company E.

Accountability Theme 1: Enable Sustainable Supply and Consumerism- play a positive role in society through supply chain decisions. Specifically through: the Direct Farm Program; Global Ethical Sourcing ; Primary Packaging Rationalisation; Local Supplier Advocacy; Consumer e-waste recycling objective; Post-consumer waste recycling; Eco-label advocacy; and Consumer Empowerment.

Accountability Theme 2: Minimise the Group Environmental Footprint. Achievable through: Energy Efficiency; Secondary Packaging Recycling; Water Efficiency

Accountability Theme 3: Champion Social Equality Initiatives. Focused on: BBBEE; Socio-economic development; Women's Economic Empowerment; Socio-economic impact of

Company E International group Merger; Employee Healthcare Benefits; and Employee HIV/AIDS Benefit (Company E Group, 2012).

3.2 What drives these objectives? E.g. legislation, regulation, consumer demand, core principles, sectoral competition, cost-savings, risk reductions, innovation etc.

Company A

Social transformation is seen to be driven by regulatory compliance. The group also says it encourages and contributes to the development of stable economies and social upliftment.

Group success is to said to be due to consistent retail at the lowest possible prices. A 'pragmatic' approach to efficiency. Overall perception of prioritisation of retail at lowest cost, and social and sustainability objectives driven by regulatory compliance and/ or pragmatic efficiency and cost benefits (Company A Holdings, 2012).

Company B

Longterm Business strategy; core principles of business and societal changes

Company C

Sustainability is driven by the fact that it makes business sense

Company D

Company culture, values, intent.

Sustainability is one of the 7 company values

A culture of wanting to "do the right thing" was adopted early on

Customer demand; a higher, more educated LSM customer base want to know how their food is being produced and are concerned about many sustainability issues.

Consumer expectations on a retailer to 'do the right thing' and push us in areas where they feel we should be doing better in. This is a big area of influence for Company D.

Global, local and sector priorities around sustainability influence how we think about things and what we focus on.

Constant benchmarking and research to learn from others on what is important and how we can solve problems to achieve our objectives.

National legislative development around climate change and the green economy in the last few years has also impacted how we have refreshed our Good Business Journey programme in the last two years and the objectives

Cost savings – particularly around energy, water and fuel saving initiatives.

Innovation – sustainability encourages innovation, which also has financial benefits.

Risk – climate change for example is becoming a huge risk factor, impacting our ability to grow and sell food. This as well as water shortage raises concerns around our entire supply base as to where and who will be able to grow food in years to come.

Competition – As part of the business case for sustainability, brand value is created. As other competitors join the sustainability journey and market what they are doing, competition does no doubt push us to do more

By focusing on technology innovation and resource efficiency in real estate, logistics and the product groups we have saved over R105 million in the last five years while reducing energy -and fuel usage, packaging and increasing the use of recycled materials in our operations and products (Company D Holdings, 2012).

Company E

Five drivers:

Prioritisation of the accountability initiatives through an assessment of each initiative in terms of the following five criteria: the legislative/regulatory driver; direct commercial benefit; resonance with government and civil society driven public discourse; relevance for International group's global sustainability commitments; positive leverage for Company E- International group's reputation in Africa (Company E Group, 2012).

3.3 How sustainable are the green practices mentioned above? How do you measure/ credit/ validate them as sustainable? E.g. Organisation, principles of sustainability, accreditation programs?

Company A

Social and Ethics Committee (formed in 2012) as part of the internal Audit and Risk Committee that oversees sustainability governance and material risks. These were formed in light of the South African Companies Act (2008) (Company A Holdings, 2012).

Company B

KPI measurement system

Communications on Progress submitted to the United Nations Global Compact (UNGC) annually- tasked to uphold Ten Principles of responsible business

Forum for the Future's Five Capitals Model to illustrate the business case for sustainability

Company B Code of Conduct, The King Code of Corporate Practices and Conduct (King III), relevant labour related and competition related legislation including the new Consumer Protection Act no. 68 of 2008, Listing on the JSE Limited (JSE) SRI Index

International standards of accountability: Global Compact, the Carbon Disclosure Project and the Global Reporting Initiative (GRI) requirements with level B status

Canadian Enviro-Performance standards for the Green Range house brand

PnP Organic Range certified using EU/USA/Japan standards as no SA ones exist

The Foundation uses the United Nations Millennium Development Goals (UN MDGs) to frame community engagements (Company B Group, 2011; 2012).

Company C

Not at present. Plans to develop one in time

SASSI credentials in sustainable seafood procurement

Group Environmental Policy

Audit Committee

Social and Ethics Committee (2012) (Company C Group, 2011).

Company D

Specific business units across the business are responsible for ensuring that targets are met and measured twice a year.

Internal auditors and external auditors (validate certain areas of their Sustainability Scorecard)

SASSI, FSc, MSC, Fairtrade, Nampak (recycling facilities at Engen), WWF, Organic Exchange accreditation (one of the textile supplier's accreditation), Farming for the Future certification and Better Management Practices, Roundtable on Sustainable Palm Oil (RSPO), Globalgap farming practices, NSPCA-approved Animal Welfare Code of Practice

South African National Accreditation System (SANAS) accredited food laboratory routine checks for food safety. Independent auditing by International Britannia (IBL) for hygiene audits

BBBEE Codes of Good Practice

Social and Ethics Committee, Sustainability Committee, Diversity committees (Employment Equity), Health and Safety Committees, HIV/AIDS committees are certain stores, Company

D Financial Services CSI committee, Company D Code of Business Principles (for all suppliers)

Wildlife ACT Fund, World Wide Wildlife Fund for Nature

Partnerships with Conservation South Africa, the Endangered Wildlife Trust (EWT), Food & Trees for Africa and Heartbeat

South African Business Coalition on HIV/AIDS.

Company D's Clothing Brand Type 2 has developed an Environmental Code of Practice (ECoP) for dyeing, printing, and finishing of goods, also launched a Sustainable Packaging Policy and Guide in 2010

Independent limited assurance engagement performed in accordance with the International Federation of Accountants' (IFAC s) International Standard on Assurance Engagements (ISAE) 3000 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information

Ernst and Young Inc. Accountants

Global Reporting Initiative (GRI) G3.1 Guidelines B+ application level

King III governance and integrated reporting (Company D Holdings, 2012).

Company E

Labelling programs

Scope to emissions for CDP report completed in 2012 and will only be available in 2013 report

No external verification but currently in process of declaring an assurance level this year

Internal auditing

Issues with verification (e.g. product life cycle) are that it is said to be difficult to determine whether a sustainable option is significantly better than an unsustainable option

Approach of identifying areas where there is a need, then attempt to play a role to fill it and meet those needs

In process of measuring impacts, but this is in process of being verified and is not measured yet

The approach towards not having a 'one size fits all' solution and no clear standard, even with an accreditation standards is that they are not always applicable in all instances e.g. fisheries MSc certified and some are not- get this recording again!

No standard to be measured against and no body for accreditation or measuring exists.

A further limitation with eco-labels is that whilst there are a lot of benefits, they don't tick all the boxes e.g. MSc is said to be particularly weak, by some, on social issues. A solution to this limitation is the approach that there is no substitute for being involved in the supply chain and identifying pragmatic opportunity to promote significant change

Direct farm supplier training by NGO partner Technoserv (Company E Group, 2012).

3.4 Have sustainability mechanisms like eco-product labelling been considered for use or in use?

Company A

No evidence found of this in reports

Company B

Support for MSC, ASC labelling for fish, and fair trade products

Company C

In planning

To follow after the development of the retailer's sustainability agenda (In planning)

SASSI labelling of sustainable seafood in earlier stages (Company C Group, 2011).

Company D

Yes

MSc, Fairtrade, Organic

Regarded as credible 'stamps of approval' by consumers who recognise credibility of the organisations behind these eco-labels

Company D in-house eco-label 'Farming for the Future' (fresh produce, wine, horticulture) to identify that a product has gone through an independent audit to meet criteria

Other labels- in-house logos or labels that are not eco-labels (not certified) but are for awareness and education around issues. E.g. Company D Fishing for the Future

Eco-labels (e.g.) allow for/ symbolise traceability of a product from the shelf to the source, ensuring no illegal or unsustainable products enter the supply chain (e.g. MSC) e.g. badger-friendly honey and other in-house supplier information labels (Company D Holdings, 2012).

Company E

Yes

Eco-wise (eco-label to educate consumers)

Fairtrade

FSc

MSc

Work with suppliers to create sustainability when eco-labels are not available

Eco-label advocacy: aimed at playing a positive role in society through supply chain decisions; promoting adoption by suppliers of independently verified eco-labels or equivalents (e.g. MSc). The adoption of eco-labels is not enforced as a procurement screen, however there is proactive interaction between eco-label owners, group buyers and suppliers for awareness of participation benefits in viable eco-label programmes. Workshops for this, are scheduled- with immediate focus and priority in energy efficiency, marine and forestry stewardship. There is disappointment however, in lack of demonstrable progress in the consistent application of energy efficiency labelling standards on major appliances in-store (Company E Group, 2012).

Section 4: Living Standards Measure

It is argued that there is a relationship between LSM categories and social and green consciousness.

4.1 What LSM groups does the company target?

Company A

All (Company A Holdings, 2012).

Company B

All - with different store formats catering to different needs although focus mostly on 4-6 and 7 to 10

Company C

All

Company D

8-10

Company E

All

4.2 Have you noticed a trend in LSM regarding environmental demands and awareness?

Company A

n/a

Company B

Higher LSM's tend to have higher awareness of sustainability issues

Company C

Yes. Increasing group of people in all LSM groups who are increasingly enquiring about green issues

Company D

Yes. LSM target group is said to be informed on sustainability and want to know about origin of products and how they are produced. Consumers are said to provide 'very quick' feedback on what and where they want changes. Consumers are also said to expect the retailer to be a leader.

Company E

Yes. A general trend is evident- a misconception that higher LSM groups are more willing to pay for environmental products. Although higher LSM groups are more aware they are not willing to pay for environmental products. There can be a real reluctance to pay more for sustainable goods (particularly in the USA). In response to this, Company E doesn't think that the consumer has to be forced to pay more for sustainable products and in fact find that you can retail a sustainable product for the same amount or less than a non-sustainable product

Established that sustainable production can be achieved at the same costs or sometimes cheaper:

1. Particularly in Packaging Rationalisation through environmental design and logistics- to increase resource efficiency and minimise costs and environmental resources
2. Energy efficiency and renewable energy sources would reduce operating costs and therefore reduce margins further down
4. The Direct farm program removes a middleman and allows for products to be obtained cheaper and allows for the farmers to be paid more
5. Eco-wise and eco-labelling
6. Ellies at Company E Building Type Retail Store promote energy-efficiency products which Company E co-markets or promotes

4.3 How do you address this? How does LSM determine your green practices/ efforts/ education and awareness? (in store/ product selection/ business processes)

Company A

n/a

Company B

Within higher LSM - would for example look specifically for specific 'green' products, within lower LSM our focus would be to create more awareness and education

Company C

Not researched at present

Children's Conference for the Environment with 120 children from SA and other African countries and other consumer education material in-store (Company C Group, 2011).

Company D

Feedback from consumers, stakeholders, and/ or activist groups is accounted for and addressed. E.g. Consumer pressure that resulted in changes in the supply chain is the introduction of 'free-range' egg ingredient in cakes and biscuits.

Issues of animal welfare and packaging are additional areas that are of concern to consumers and require constant accounting for

Company E

Through the initiatives, promotions and consumer education e.g. Eco-wise and the Ellies energy-efficiency promotion

4.3 In cases of lower LSM, do you educate the consumers on environmental issues?

Company A

No evidence of this in reports

Company B

Yes. Environmental issues and community development issues

Company C

A part of the companies commitments made in a recent review of its business strategy, for which initiatives will develop in 2013

The retailer also had a Children's Conference on the Environment. (Company C Group, 2011).

Company D

Majority of consumers are said to be educated on environmental issues, there are still many in the LSM target market who are not informed, and there are consumers that are disinterested. For this reason, the retailer assumes partial responsibility in educating and creating awareness through marketing, in-store messaging, campaigns, packaging, website, etc. Education on sustainability is said to also be suitable for lower LSM consumers. Making the Difference (MTD) Educational Programme (annual report) is a program for educating school children from disadvantaged areas around sustainability issues as they are seen as future consumers who can benefit from learning about responsible choices one day

Company E

Yes

4.4 What social- environmental green practices are underway or planned for?

Company A

CSI and Socio-economic development:

>1% of net profit after tax (NPAT) (2011) on CSI projects

Partnership in crime-prevention campaigns in Western Cape and Gauteng police departments

Company A Feeding Programme mobile soup kitchens with plans to extend to other countries

Company A Company A's Retail Store Women of the Year Awards

Strokes of Genius (with governmental depts.) online gallery for local artists and craft workers

Damaged Items- unfit for display- donated to not-for-profit organisations. 2011: ~R89million worth of foodstuff

Company A Community Network. 2011: R1.2million to causes and community projects (Company A Holdings, 2012).

Company B

Partner with customers and share the sustainability journey. Continued focus on education and awareness in the school club, which has 1.5 million learners. In addition to education/awareness continued work within areas such as energy, waste, water and supply chain

Sustainability Focus: Supporting communities in their contribution to change

Key strategic focus on partnerships

Company B Ackerman Foundation supports community-based projects for economic self-reliance and facilitates market access for small businesses

The Foundation's values for developmental work: efficient use of natural resources; creation of prosperous livelihoods instead of jobs; focus on the whole community; start-up support (incubation); ready-to-grow businesses (acceleration) support; and the facilitation of economic sustainability and self-reliance

Multi-faceted approach supporting individuals, enterprises, communities with expertise and experience

Suppliers encouraged to implement environmental and social practices and the elements of sustainable practices socially, economically, and environmentally are included in project assessments

Permanent employment for 60 women in a small business manufacturing eco-bags sold in store

>36 small enterprises supplying PnP with products, services, goods have been supported and developed by the Foundation

Programme to assist small suppliers with the challenge of compliance (e.g. soil testing etc) (Company B Group, 2012).

R54.4m contributed to CSI initiatives (Company B Group, 2011).

The Foundation (see pg 53 of sustainability report for more info- because I didn't include it).

The Foundation uses the United Nations Millennium Development Goals (UN MDGs) to frame community engagements (Company B Group, 2011).

Company C

Two pilot projects underway with schools in a collaborative process between the company, suppliers, an NGO, a school, teachers, parents, and retail stores; a sustainable feeding scheme at the school. It involves the sale of excess produce to the local Company C supermarket

An emerging farmer strategy is under development that aims to include emerging farmers into the supply chain, thereby creating a business opportunity for the farmer whilst securing future produce supplies

2011 Children Conference on the Environment

2013 Children Conference on Sustainability in planning

Aims of positive socio and economic changes to previously disadvantaged communities and Corporate Social Investment is core to the upliftment programme

R9.6m spent on CSI of profits after tax (2010: R9.3) focused on poverty alleviation, healthcare, hunger, safety

Partnered with Operation Hunger and involved in 7 (2010:6) feeding schemes under banner 'Isonka' 'feeding the community'

Further community participation support: Ikamv'elihle Rehabilitation Centre, Ubomi Obutsha community feeding scheme, Nelson Mandela Metropole University initiative, Arebaokeng Child Daycare Centre, Junior Achievement South Africa ('JASA') programmes, JL Zwane, Ubuntu House, MaAfrica Tikun, Heavens Nest, Sinyakhaya Soup Kitchen, Stars of Today, Gozololo Daycare Centre, Izulu Orphan Projects, Kids Haven Orphanage

Work with the Consumer Goods Council of South Africa Crime Prevention Programme and Business Against Crime and local police (Company C Group, 2011).

Company D

EduPlant (see report for more detail)

Making the Difference Educational Programme

Farming For the Future (addresses relationship between climate change and poverty)

Enterprise Development Programme (enterprises that create employment and skills whilst addressing environmental issues e.g. Isikhwama - reusable bags and De Fynne Nursery - indigenous plants)

Recognised need for sustainability to include socio-economic transformation

Total CSI contribution of R438m in 2012. Surplus product distributed: R393m. MySchool contribution: R35m

R382m surplus foods and R11m clothing donated to causes in 2012 (cost to company not retail price)

Food insecurity is addressed through EduPlant and Food & Trees for Africa that reaches 2536 schools with 5918 learners, educators, community members, with the intent to enable communities to grow food sustainability and cost-effectively using permaculture principles

Education through MySchool (includes MyVillage and MyPlanet) supports selected charities and environmental organisations, and the Company D Making the Difference Educational Programmes for primary and secondary schools (1900 schools with an annual R3.5m contribution from Company D) has received R200m to date and R35m in 2012 with 646000 supporters. This has supported more than 10 951 beneficiaries (Schools, Villages, Planet)

Making the Difference through Design was launched in 2012 for design and art high school teachers (in collaboration with Western Cape Education Dept, Sappi, and Design Indaba) intended to provide exposure to fields like architecture etc.

Company D Trust with Heartbeat provides care for orphaned and vulnerable children, allowing 3000 go stay in their own communities. In 2012, the Emthonjeni and Jozini areas were supported. The project allows 12 non-governmental organisations (NGOs) to participate in training and mentoring with Heartbeat

Staff giving as stores support local social development projects, schools, charities. The Company D Trust matches funds raised by stores up to R4000. Additionally, stores have their programmes distributing surplus food and clothes locally

The Enterprise Development (ED) programme supports emerging black-owned organisations in the supply chain (primary and secondary suppliers) providing assistance with cash flow management, developmental needs, finance availability through ED loan fund (Company D Holdings, 2012).

Company E

Direct Farms Program

All Sustainability Programs are socially inclusive

Local communities of the Seafood programme are benefited and no longer marginalised because of commercial suppliers

Cotton Program

Women's Empowerment Program

Total Company E Group and International group Foundation CSI spend as PAT for 2012 is 3.1% and 37.4m contribution (as the International group Foundation supplemented the Company E Group investment with R8.3m contribution)

Accountability Theme 3: Champion Social Equality Initiatives: be responsive to socio-economic development opportunities in direct range of influence. Specifically through:

BBBEE: aims to achieve and maintain Level 4 status. Ranked second in retailers in the 2012 FM Top Empowerment Companies Survey. Company E Discount Divisions (Company E Hypermarket Retail Type Store and Company E Electronics Type Retail Store) score is higher than that of the top ranked retailer in the survey, but group score declined overall.

Socio-economic development: aimed to invest a minimum of 1.0% PAT in education-focused social development initiatives benefit the poor through primary school nutrition, early childhood development (ECD) and school maintenance projects.

Schools nutrition initiatives led by mobile container kitchens that prepare approximately 20.0 million meals per annum. Initially funded by Company E Hypermarket Retail Type Store and Company E Cash Division with the Department of Education. The International group Foundation joined and donated \$1.0 million under the auspices of the Nelson Mandela Foundation and Basic Education Department's 94+ campaign.

Company E Building Type Retail Store's "Vegetables Under Construction" initiative enables fresh vegetable sustainable cultivation at schools and Company A Warehouse Type Retail Store provided assistance to the Centaurus and African Children's feeding schemes.

Company E, Cambridge Food and Company E Hypermarket Retail Type Store Foodco provided food donations to FoodBank SA.

Company A Warehouse Type Retail Store and HOPE Worldwide developed the Company A Warehouse Type Retail Store Growing Hope, Sowing Minds programme assisting crèches, caring for orphaned and vulnerable children to achieve minimum standards for government support.

Company E Hypermarket Retail Type Store donated purpose-designed ECD "Tools to Play" kits to under-resourced pre-schools and crèches with educational toys and musical instruments to develop young children's abilities.

Company E Building Type Retail Store donates prefabricated storage sheds with maintenance, garden, DIY tools and supplies to schools in need of maintenance.

3,500 stationery hampers were donated to children of deceased South African Police Services officers and 5,000 food hampers to families with members deployed in the South African National Defence Force- projects possible due to suppliers' support.

Women's Economic Empowerment: aimed to increase economic opportunities for women. One of International group's global goals is the empowerment of women in employment and the supply chain.

The Rural Women's Trust has provided microloans to 12,024 rural women, and the bursary scheme targets women undergraduates and wholesale stores optimises women managed (stokvel) collective saving scheme opportunities.

With International group's advice, women-owned suppliers are profiled to promote their merchandise to Group buyers.

Empowerment survey for females across all divisions.

Socio-economic Impact of the Company E International group Merger: a study of the socio-economic impact of International group's entry into South Africa to assess factors such as consumer pricing, job creation, emerging farmer development and local manufacturing for a Supplier Development programme.

Employee Healthcare Benefits: to increase employee access to affordable subsidised private medical benefits.

Employee HIV/AIDS Benefits: aims to combat the infection rate amongst employees and provide spouses with free access to pre-HAART and HAART programmes (Company E Group, 2012).

Section 5: JSE Carbon Disclosure Project or other

5.1 Have you participated in the JSE Carbon Disclosure Project, or another similar project?

Company A

Has not completed a full carbon assessment

No specific reduction targets set

Plans for full disclosure and targets

In 2011, the first carbon footprint assessment was said to be initiated following CDP protocols with limited Scope 1 emissions, and able to report on Scope 2 emissions (electricity consumption) more accurately as electricity consumption in supermarkets and fuel usage in the supply chain constitutes the bulk of the Group's carbon footprint. The increase in Scope 2 emissions over last year's estimate is said to be due to better reporting (Company A Holdings, 2012).

Company B

Yes

Company C

Yes

For the three previous years

Company D

Yes

Company E

Yes

Gold margin

5.2 If yes, what were the criteria/ outcomes/ benefits?

Company A

n/a

Company B

Benefit of increased transparency within the retail industry, with regard to climate change activities and helps companies develop and structure climate change strategies

Sustainability focus: enhancing governance and accountability

CDP score improvement from 77 to 86 and placement in performance band A-

Inclusion in the JSE 100 Carbon Performance Leadership Index

Reduction of 4.6% from 2011 and an emissions intensity improvement of 11%

Investigation into the eligibility of some energy-saving projects for inclusion under the Clean Development Mechanism (CDM) (Company B Group, 2012).

Company C

Provides for a more robust system of data collection for electricity, fuel, and water usage with more focus in these areas resulting in a reduction in emissions over the three years of participation in the project

Plans to optimise data collection, investigate emission reduction opportunities, and establish a robust set of environmentally focused key performance indicators (Company C Group, 2011).

Company D

Benefit of understanding of and addressing the company's carbon footprint

Ranked sixth in the Carbon Disclosure Leadership index in the 2011 for SA and one of the top seven companies in the Carbon Performance Index (Company D Holdings, 2012).

Company E

Project participants but are not limited by the project and feel there is more to it and cannot stop there but can do more

Report Scope 1,2, 3 (limited parts of 3). Electricity is said to be the most important scope – unfortunately South Africa burns coal and for this reason they are looking to develop projects in the area of renewable energy.

Although they are part of the project, they are not limited to it and see opportunity in further endeavours.

Scope 1,2,3 are reported but limited reporting in Scope 3. Electricity is an important scope, unfortunately in South Africa coal is still used and for this reason there is investigation into renewable energy projects.

Section 6: Sectoral Trends and Information

6.1 What are the trends in greening retail at present?

Company A

No evidence of this in report

Company B

Less electricity usage, more frequent shopping trips, water reductions, waste reduction and recycling, local sourcing and small farmer development

Company C

Yes

Store design

Packaging Reviews

Ethical sourcing of products

Consumer information on various initiatives

Increased transparency and accountability for those organisations who make public commitments to green retail

Company D

Yes

Recyclable and recycled content inclusive packaging

Waste Management

Energy Management

Water Management

Sustainable procurement and sourcing

Marketing and communications of 'green' initiatives, with an emphasis on the brand value created through the appearance of being a 'green' retailer

Company E

Yes

Product focus

Electricity

Waste

Water

Carbon – particularly carbon reduction in retail

Sustainable agriculture is rapidly increasing

Waste-packaging rationalisation

Sustainability of products- eco-labels and impacts of the supply chain

6.2 Does this drive your practices/ competition?

Company A

n/a

Company B

These are part of the business strategy

Company C

There is an element of this, but the overriding driver is that it makes good business sense and ensures the future viability of the business

Company D

Yes

Sustainability credentials add brand value and are important

Company E

The expectations of stakeholders are balanced with commerciality, business relevance and materiality to come up with practices so that it is not a comparison between retailers but retailers have the same pressures and how these are addressed is often varied/ variable

6.3 What are the future trends that you may need to respond to/ strategise/ plan for? E.g. green retail product stewardship programs in the near future that you might look to include in order to meet or create competitive advantage?

Company A

No evidence of this in report

Company B

Increased focus on adaptation activities and climate change impacts increases.

Increased focus on agriculture and wider supply chain

Company C

Company D

Water security in the supply chain

Company E

Sustainable agriculture (as there is a move into fresh retail)

Consumer education and awareness

The identification of opportunities to improve the sustainability of products

Waste particularly e-waste

6.4 Have you created your own trends as a leader in green retail regardless of competition and is this continuous strategy?

Company A

No evidence of this in report

Company B

No intention of creating trends, green retailing is an ongoing part of company strategy

Company C

No

Company D

Yes

Flagship food programme: Farming For the Future

Reusable bag initiative and the cause-related marketing of the reusable bags

Company E

No. Possibly e-waste recycling

Section 7: Best Practice

7.1 Have you created any green or social business process best practices/ strategies/ frameworks?

Company A

Not seemingly from the reports available

Company B

No

Company C

Sustainability is integrated into the business strategy and thus not seen as an add on, meaning that any business decision made is considered in light of its impact on the environment and on the communities operated in

Company D

Yes

Farming For the Future

Fishing For the Future

EduPlant

Enterprise Development Programme

Engen Recycling Programme

Cause-related marketing through reusable bags

Company E

In Seafood, a new business process that requires seafood suppliers to provide conditions of gear type, origin, etc. This is not from SASSI but created internally

Packaging Workshop aimed at increasing the sustainability of packaging

Waste Workshop

A 'Green Book of Answers' green buyer's book of guidelines created for consumers

7.2 Have you received any green or social awards/ recognition for your practices?

Company A

*3rd place in overall community upliftment (Sunday Times Top Brands Survey 2011)
(Company A Holdings, 2012).*

Company B

Climate Change Leadership Award (retail category) for development of eco-friendly stores and ongoing climate change education

Sunday Times Top Brands Grand Prix Award for third year in a row for doing the most to promote a more 'green' lifestyle

Second in the Mail & Guardian's annual Greening the Future awards for the most innovative environmental strategies

The Environmental Social Governance award at the African Access National Business Awards

Innovation Through Technology award at the African Access National Business Awards

'Energy Project of the Year' Africa Energy award

'Energy Efficiency Awareness' Eskom eta award

Recognition from Eskom for Innovation in energy savings

Recognition by the Sunday Times as South Africa's leading company in the promotion of green awareness (Company B Group, 2011; 2012).

Company C

No

Company D

Yes

2012: Finalist for the 2012 International Responsible Retailer of the Year (won twice in the last four years) at the 2012 World Retail Awards

Ranked first overall among top 20 JSE listed companies in South Africa by the Reputation Institute (ranked first in every category)

One of the 16 sustainability champions in the developing world (World Economic Forum)

Sixth out of the top 100 companies in SA on the Climate Change Disclosure Leadership Index by the Carbon Disclosure Project and one of the top seven companies in the Carbon Performance index

Winner in the retail category in the South African Carbon Leadership Awards (2011, 2010)

One of the JSE Socially Responsible Investment Index (SRI) index's best performers

Dow Jones World Sustainability Index (2011/2012) (one out of the only five SA companies)

Runner-up in the water care category at the 2012 Mail and Guardian Greening the Future Awards

Third in the Sunday Times 2012 Top Brands survey in the category 'brand that has done the most to promote green'

MySchool MyVillage MyPlanet voted number one Community Programme in the Sunday Times Generation Next brand awards (June 2012) (Company D Holdings, 2012).

Company E

Yes

South African Ernst & Young Excellence in Corporate Reporting Awards recognition of an Excellent rating for the past seven years

Ranked top of JSE retail sector in FM/Empowerdex 2011 Top Empowerment Companies Survey (http://www.Company E.co.za/corp_profile/awards.asp)

Ranked in top 10 of Ernst and Young Excellence in Annual Reporting Awards (June 2010 report) (Company E Group, 2012).

7.3 Do you follow any best practice frameworks e.g. Natural Step

Company A

King III, G3.1 guidelines of the Global Reporting Initiative (GRI) (Company A Holdings, 2012).

Company B

Communications on Progress submitted to the United Nations Global Compact (UNGC) annually- tasked to uphold Ten Principles of responsible business

Global Reporting Initiative (GRI) requirements with level B status

Forum for the Future's Five Capitals Model to illustrate the business case for sustainability (Financial and manufactured, Human and Social, and Natural Capital)

Canadian Enviro-Performance standards for the Green Range house brand.

The Foundation uses the United Nations Millennium Development Goals (UN MDGs) to frame community engagements (Company B Group, 2011).

Company C

Not directly. Triple bottom line approach to business

Company D

King III, G3.1 guidelines of the Global Reporting Initiative (GRI), NSPCA-approved Animal Welfare Code of Practice, BBBEE Codes of Good Practice, RSPO Principles and Criteria for sustainable palm oil practices, Farming for the Future (FFF) Better Management Practices, Globalgap farming practices (Company D Holdings, 2012).

Company E

No

Direct farm supplier training by NGO partner Technoserv (Company E Group, 2012).

7.4 Are you affiliated with any such organisations?

Company A

No evidence of this in report

Company B

Yes - for example support of cooperatives ; water and waste reduction efforts, continued focus on food security

Company C

Yes

Company D

-

Company E

Yes but not in these terms

Section 8: Environmental/ Socio-Economic Principles

Do you specifically implement principles of:

8.1. Natural Capitalism ('new industrialism', restoration, value, and enhancement of natural capital resources and services)

Company A

Not seemingly from reports

Company B

Use of a model based on different forms of capital.

Company C

Yes

Company D

Elements of it indirectly in the report

Company E

Elements of it indirectly in the report

8.2 Vulnerability Science (for effective social intervention or upliftment)

Company A

No evidence of this in report

Company B

Yes – the company continually invest R50 million + per year in corporate social responsibility projects

Company C

No

Company D

Children vulnerability is a specific focus of Socio-economic development

Company E

-

8.3 Industrial Ecology (e.g. radical resource productivity)(e.g. product stewardship etc).

Company A

No evidence of this in report

Company B

No

Company C

The association with SASSI has aligned their branded seafood procurement with the MSC. Plans to look to the FSC for packaging of their branded products.

Company D

Focusing on technology innovation and resource efficiency in real estate, logistics and the product groups, over R105m has been saved in the last five years while reducing energy and fuel usage, packaging and increasing the use of recycled materials in operations and products (Company D Holdings, 2012).

Company E

-

8.4 Innovation (e.g. unique projects specific to business processes etc.)

Company A

No evidence of this in report

Company B

Yes - for example introducing new kinds of packaging / making use of biodegradable products

Company C

Not yet

Company D

It has been established that focus on social and environmental issues drives innovation and operational efficiencies in their business. Focusing on technology innovation and resource efficiency in real estate, logistics and the product groups, over R105m has been saved in the last five years while reducing energy and fuel usage, packaging and increasing the use of recycled materials in operations and products (Company D Holdings, 2012).

Company E

-

Section 9: Management and Value Systems

9.1 Is sustainability a core drive/internal psychological cause for top management?

Company A

Not seemingly a core drive or cause of top management

Company B

Yes

The Executive Steering Committee is formed by the Chairman, Chief Executive Officer, Marketing and Sustainability Director, and Transformation Director (Company B Group, 2011).

Company C

Yes. Senior management implements and monitors

Company D

Yes. A Sustainability Committee at Board level drives sustainability, ensuring sustainability is driven from the top management levels of the company

Company E

Yes; a core consideration in top management

9.2 Is there structure and positions for sustainability within the company?

Company A

Social and Ethics Committee within the internal Audit and Risk Committee (formed in 2012). Senior management addresses sustainability issues of B-BEEE and HIV/AIDS that affect the group. Each division is responsible for its sustainability targets and operations (Company A Holdings, 2012).

Company B

Yes

Strategy review and impacts: Executive Sustainability Steercom as well as Social and Ethics committee

Operational Roles: Sustainability Director, Sustainability General Manager and Sustainability Manager

Operational management: Operations Steercom - consisting of GM's from all business divisions.

Company C

Yes. Executive Level

Company D

Yes

Central team of two in the Good Business Journey that play a strategic, supportive, advisory role to the rest of the business units. Sustainability is then integrated into people's day jobs within the different business units. One Project Manager in Foods solely assigned to the Good Business Journey

Company E

Yes