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Employee Responses to Environment Management Practices

By

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Dedication

This Dissertation is lovingly dedicated to my Late Parents Lall and Maya Seepurshad, who have been a constant source of inspiration. They have given me the drive and discipline to tackle any task with enthusiasm and determination and would have been proud of this achievement.

Abstract

The impact that organizations have on the environment is a growing concern for organisations, governments and ordinary citizens alike. The Global focus on environmental protection programmes has led to initiatives such as the Kyoto Protocol, and Conference of the Parties (COP) which attempt to develop policies and rules for practical and effective implementation of environmental protection programmes for countries and organisations alike. Deloitte is no exception to this as their commitment towards the environment in the Deloitte policy statement reflects a commitment to responsible behavior towards the environment. The concern, however, is the consistency of the implementation of the policy throughout the organization. The aim of this study was to understand the behavior and practices of staff in relation to the green office policies at the Woodlands and the Durban offices of Deloitte. An empirical study using a quantitative data collection approach was conducted. A random sample was used and 489 staff members participated in the study. In terms of sample size

tables, these results can be generalized to all non-management employees of Deloitte. Data was collected using an online questionnaire. The salient results showed that the Durban respondents were more *au fait* with the green policies of the company than the Woodlands respondents. It was evident that the younger staff had very little time to read the greening reports and as such were not entirely aware of the practices within the company. It was recommended that in order to ensure the awareness and participation of all employees in greening efforts that Deloitte should re-induct existing employees emphasizing the green policies. The policies and reports should be communicated in a format and media which appeals to younger employees. Competitions, incentives and rewards should be introduced in order to spread the awareness and change in green behaviour. Whilst the study was limited to two offices only, the recommendations of this study could be implemented in all the South African offices of Deloitte.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Environmental Management has become an issue of global importance with implications for all businesses, ranging from government institutions to non-profit organisations. This chapter presents an overview of the research undertaken in which the motivation for the study; the focus and problem statement of the research are described. The research question is stated followed by the objectives used to address the research problem. The limitations of the study are identified and a brief overview of this study provided.

1.2 Problem statement

As a company, Deloitte has strict policies on matters relating to behaviour; information technology; dress code; and time management amongst others.

As well as these, they also have a Green Policy which relates to the Environmental behaviours of the organisation and the employees. These policies are strictly monitored and defaulters are corrected where necessary. It has been observed however, that the Green Policy has not been monitored as strictly as the other policies and that practices in enforcing this policy differ between offices and regions.

This study will answer the question: Are there differences in green office practices and implementation of the Green Policy between the Durban and the Woodlands Offices of Deloitte?

1.3 Motivation for the study

In answering the research question, this study will benefit management as they will have a clearer picture of the current green practices and staff will become more aware of green initiatives. Academia will benefit from the contribution to new knowledge by this study. Future generations will benefit from the improved environmental practices at Deloitte and the Deloitte model could be shared with other organisations.

1.4 Focus of the study

Deloitte has Offices across South Africa and employs staff at various levels. This study focused on staff at all levels in the Durban and Woodlands Offices only.

1.5 Objectives of the study

The objectives emanate from the problem statement which identified discrepancies in the practice and implementation of the Green Policy between two of the office branches. The constructs of the objectives emanate from the

Deloitte policy and the literature review. The objectives are to determine if the organisational Environmental Management practices and policies have been communicated to staff; to determine whether recycling zones have been established to facilitate the this policy; to determine the amount of waste being recycled; to determine what waste is being recycled; whether employees are aware of the Green Policy and to identify green practices at Deloitte.

1.6 Limitations of the study

The limitations of this study include time, sample size, sample population, poor participation and access to the questionnaires. These will be discussed in detail in Chapter Five as well as solutions to overcome these.

1.7 Outline of the study

This study was approached in a manner that provided a logical flow of the research process undertaken. The study is presented in five chapters as follows.

In Chapter One an introduction to the research problem, the motivation and focus of the study and the research question are addressed. The objectives and limitations of this study are also identified.

Chapter Two is the literature review which provides a review of other research related to the topic.

Chapter Three describes the various research methods employed in this study as well as the logic behind their selection. It discusses the procedures undertaken to arrive at the results including data gathering and methods of data analysis.

Chapter Four provides a presentation and discussion of the results.

Chapter Five is the final chapter of this study in which conclusions are drawn and recommendations arising from the study are presented. The limitations identified in this study are discussed and recommendations for further research are suggested.

1.8 Summary

This chapter provides an introduction, motivation and overview of the study undertaken. To understand the factors influencing Environmental Management, the next chapter offers a literature review which will incorporate other studies in this field in order to provide a basis and a better understanding of Environmental Management.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The factors that encourage organisations to behave in an environmentally friendly manner have not yet been properly researched and understood. In the twenty-first century, businesses are taking a more strategic approach to Environmental Management and motivating employees to achieve environmental goals. A common term in every day usage is “save the environment / climate change.”

Organisations are showing a growing concern regarding environmental concepts and many attempts are being made to implement changes and increase awareness. These changes may be as basic as the implementation of the 3R’s: re-using packaging; recycling material and reducing resource usage according to

(Grove, Fisk, Pickett and Kangun 1996). Basic practices are promoted by 'green teams' who educate staff and encourage green behaviour in the workplace. This practice, however, is dependent on organisation's free will and is therefore done at a low level. There is hope to rectify the past neglect as Mike Powell a restoration ecologist describes the humble "spekboom" (or pork tree) as a miracle plant with the potential to heal over hectares of degraded, eroded land across the Eastern and Western Cape (Schneider 2010).

This chapter will present existing literature on the subject in order to create a platform for this study.

2.2 Leadership and green commitment

Commitment from senior management provides a framework for environmental improvement in that they determine and establish the environmental policies and the level of training and communication required for implementation of these policies. Without a solid framework, it is almost impossible to motivate employees to take effective steps towards environmental improvement. Many projects undertaken by corporations in the past that benefit the environment were the result of new legislation; community pressure; or customer safety concerns (Olson 2008).

According to Mushwana (2009), "A number of organizations are radically altering their business practices to preserve the environment". The commercial property industry has been developing tools to help landlords and tenants to understand the environmental impact of building use. With the majority of commercial property occupied by tenants, this means that thought needs to be given not only to design standards, but to the way the landlord and tenant relationship functions towards joint Environmental Management.

Claussen (2005) describes different classes of organisations when it comes to their approach to climate change: those that do not accept the science of climate

change; those that accept the science and are handling the issue internally to reduce their contribution to the problem and those that are advocating strong government influence in the matter. The size of the organisation however, is vital when these classifications are used. Struggling businesses trying to survive may not be concerned with the environment (Claussen 2005). On the other hand, larger more stable enterprises may have the time and resources to dedicate to environmental issues.

Hinnels, Bright, Langely, Woodford, Schiellerup and Bosteels (2008) mention that a key player in environmental management is the facilities manager, especially in larger and multi-tenant complexes.

The facilities department has tools available to manage the usage of utilities on the premises. A simple example is a Building Management System which can assist in allowing the air conditioning system (a primary consumer of electricity) to perform more efficiently. Basic functions include programming the system not to operate on Public Holidays and after hours, and winter and summer settings etc. Building Management Systems also manage lighting and plumbing facilities which drastically reduce utility consumption when effectively managed.

2.3 Government involvement

Schneider (2010) discusses the new bottom line following the King 3 report on corporate governance in South Africa. Johannesburg Stock Exchange (JSE) listed firms have become the first in the world to be required to publish integrated reports which will not only involve financial performance, but include their sustainability by disclosing the positive and negative effects their operations have on the stakeholders and the broader environment. The author goes on to say that companies' carbon footprint and use of water are also coming under close scrutiny. The Carbon Disclosure Project (CDP), covering the JSE's top 100 companies now requires companies to disclose not only their current carbon footprints but the progress in reducing them. The author further mentions that a gradual shift from coal-based electricity to renewable energy, and particularly

solar energy is in line with South Africa's Long Term Mitigation Scenarios on climate change which envisages the development of a low carbon, climate resilient economy by 2050 (Schneider 2010). Concentrated solar power systems use the sun as their heat source as opposed to the conventional system of using fossil fuels such as coal to run generators to produce electricity. Major corporations are planning large scale solar parks that could eventually match the ability of coal-fired power stations to generate electricity. Wind power is becoming increasingly attractive. Not that wind is a replacement for coal in the short or even medium term, rather, wind is the most readily accessible source for generating significant quantities of electricity, and reducing dependency on increasingly expensive coal-based energy. The advantages of wind energy is that it is clean; installation and operating costs are declining and feedstock is free and infinite. The South African government appears to be looking at buying 400MW of wind energy by 2013, and 1000 MW a year thereafter (Schneider 2010).

2.4 Driving forces towards green offices

What drives organisations to incorporate environmental issues into their operation is a question frequently asked. Generally, staff bring ideas from their personal lives into an organisation and start to practice green behaviour, in some instances without management even knowing.

Wittneben (2009) offers a few researched answers on why climate change considerations should be incorporated in business decisions. They include the following:

- Political reasons call for business concern for climate change
- Considering climate change is economically advantageous
- Environmental awareness enhances public relations

Olson (2009) has a different viewpoint and believes that the driving force towards green office practices is the understanding of global warming, climate and weather change. This understanding will drive the organisation to improve their

positions as environmental stewards. Businesses can gain valuable insight into what actions can be taken by identifying and measuring key performance indicators that characterise the carbon footprint of an organisation and by understanding where the most significant sources of greenhouse gas emissions come from. In this way, businesses can target the highest contributors to their carbon footprints and target improvement, and they can measure and understand how the operations of the enterprise contribute to greenhouse emissions. Business leaders can evaluate their extended value chain to make better decisions as environmental stewards and influence activity outside the walls of their own company (Olson 2009).

If the understanding of greenhouse gas emissions can open up opportunities for companies to develop new products, create relationships with new business partners, and even grow entirely new business segments that create higher value for new and existing customers and improve environmental impact on a very broad scale.

2.5 Green strategy

Worthington and Patton (2005) mention that organisations are increasingly viewing environmental issues as strategic issues. Green initiatives require resources, and finance is a major issue which could slow down the process of implementation. Basic costs in an office environment will include the engagement of waste segregation companies, these costs will be over and above the cost of the normal solid waste removal. Other costs include educating staff, loss of production hours, once off investment in special recycling bins and zoning of green areas.

Hasselmann, Latif, Hooss, Azar, Edenhofer, Jaeger, Johannessen, Kemfert, Welp and Wolkaun (2003) explain that a climate policy should be developed as a sequence of small; simple steps. In this way, deviations can be detected and easily managed. Cook and Seith (1992 cited in Govindarajulu and Daily 2004)

state that companies committed to environmental improvement require resources both financially and organisationally to support the effort.

A strategy is directly associated with senior management. The involvement of senior management streamlines activities and barriers to cost factors are more readily crossed. A flow of tasks from the top will streamline the process and also create a sense of importance to staff members. Strategies are often associated with control measures; evaluation procedures and constant measurement. A company wishing to consider the environment it operates in, should develop and implement a green strategy. Olson (2008) mentions that the fundamentals of a green strategy should help the organisation make decisions that have a positive effect on the environment. The author goes on to say that although organisations are changing their operations to create a positive impact on the environment, there are very few that have established a “green strategy”. A green strategy, as defined by Olson (2008), is based on a formalised document created by management that encourages the organisation to act in a responsible manner towards the environment. This may include such initiative as recycling, reduced printing and greater use of electronic data; more efficient use of utilities; incorporation of solar panels and migration from conventional to gas appliances in the canteen. These initiatives are delegated to lower levels of management to implement throughout the organisation. They are monitored and deviations are corrected. Monitoring includes quarterly reports on waste and recyclables leaving the building and the evident decrease in utilities. It may also include penalties for defaulters. As Olson (2008) explained the accelerating rate of green procedures in companies and mentioned that few have established a strategy, this could also point out that these ideas may not be generated from senior management but by staff at lower levels who have an interest in the environment.

Setting a clear vision and strategy enables staff to make better decisions that align with the organisation’s priorities to provide products and services in the marketplace. An enterprise level green strategy is no different. Unlike other areas

of strategy formulation in a company, green strategy affects decisions that are made across the entire enterprise (Olson 2008).

Figure 2.1 depicts how a green culture fosters a common culture of awareness and action, which in turn facilitates decisions and initiatives that improve the environment and may have attractive value propositions that are cost effective.

A Green Strategy fosters:

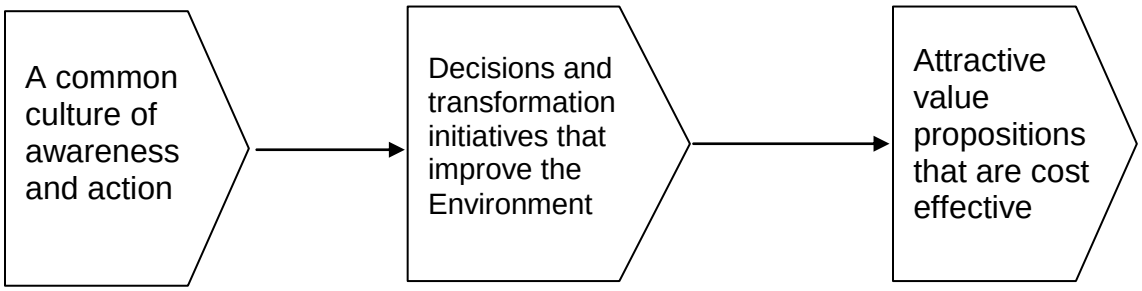


Figure 2.1 A Green strategy model

Source: Olson, E.G, 2008, *Creating an Enterprise-level "green" strategy*, vol. 29, (online Emerald)

A culture around environmental issues should be established and proactive behaviour in office environment should be part of daily activities. Appropriate tools should be provided by the organisation so this culture should be easy; enjoyable and rewarding. The ability to identify business activities and their effect on the environment should be integrated with the rest of the business operations and asset strategies so that priorities are aligned and conflicting interests are easily resolved. The green strategy and action it supports should seek to identify benefits to both top line revenue and bottom line costs.

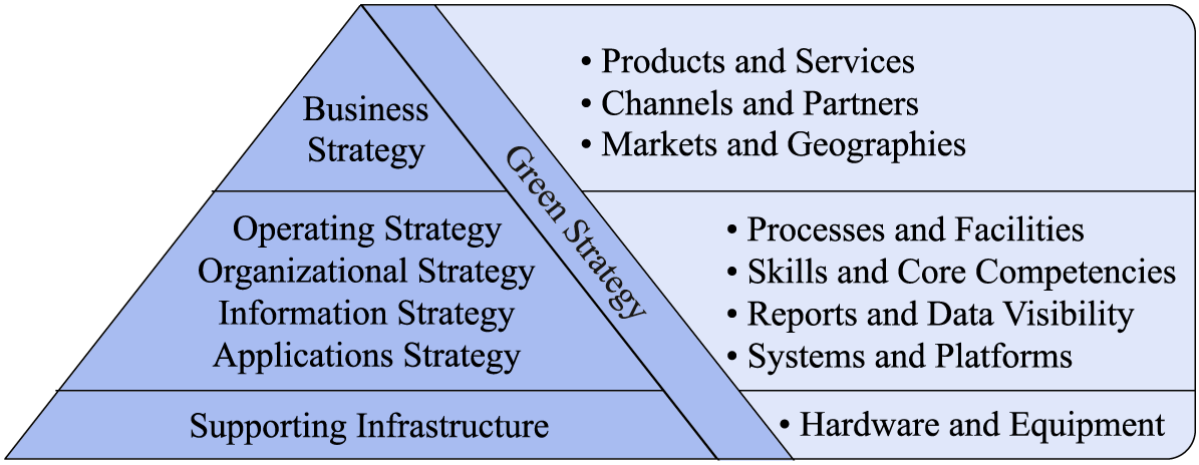


Figure 2.2 Strategy pyramid and operations influenced by a green strategy.

Source: Olson, E.G, 2008, *Creating an Enterprise-level "green" strategy*, vol. 29, (online Emerald)

In Figure 2.2, the green strategy is noted to be in-between the business strategies, which represents top management, and the lower levels of operations were production and operations occur. The importance is noted as being between these two sectors and also two way communication is possible when the green strategy is placed in this manner.

2.6 Green buildings

With buildings estimated to account for approximately half of all annual energy and greenhouse gas emissions, one potential solution is to ensure that the design, construction and maintenance of the built environment is environmentally sustainable, Brown, Cole, Robinson & Dowlatavadi (2005 cited in Miller & Buys 2008). Whilst definitions vary, a green building is one that "uses a carefully integrated design strategy that minimizes energy use; maximizes daylight; has a high degree of indoor air quality and thermal comfort; conserves water; reuses materials and uses materials with recycled content; minimizes site disruptions

and generally provides a high degree of occupant comfort" (Kozlowski 2003, p. 27, cited in Miller and Buys 2008). Through the integration of innovative and efficient technologies; sustainable design approaches and environmentally sensitive site planning practices, the ecological footprint of new buildings is significantly reduced at a minimal financial cost (Kozlowski 2003; Lucuik, 2005 cited in Miller and Buys 2008). Whilst there is increasing recognition that green buildings outperform conventional buildings in terms of a variety of environmental; economic and social indicators, much less is known about how green building initiatives might be incorporated into existing buildings, which make up the bulk of the market (Miller and Buys 2008). If the challenge of climate change is to be successfully addressed, this vast stock of older buildings (developed decades ago when sustainability was not a consideration) needs to be retrofitted (Miller and Buys 2008).

2.7 Green marketplace

Every enterprise strives towards a goal. A profit seeking enterprise will seize any opportunity to add to its long term profit. The green marketplace in recent years has posed as a new territory for businesses to explore. As consumers are becoming more responsible towards the environment, they seek green products to compliment this behaviour. Ottman (1992 in Mee and Clewes 2004) recommends that organisations should anchor their response to the green consumer around four E factors: make it Easy for customer to be green; Empower customers with the knowledge to be green and act responsibly; Enlist the support of customers, and Establish credibility.

Green marketplaces are developing in many parts of the world, delivering products to the "green consumer" socio-demographic segment, that is, those consumers who make their buying decisions at least partly on the basis of personal environmental criteria (Hartman and Apaolaza Iba´n˜ez 2006). Specialised green producers and retailers have emerged and are competing for

the patronage of this segment with a number of mainstream companies that have also launched initiatives targeting green consumers.

The key challenge for green marketers in the past has been and will be more so in the future, to strengthen individuals' perceptions of the benefits to be gained from "going green", by adding more and stronger emotional values to green brands (Hartman and Apaolaza Iba´n˜ez. 2006). The authors suggest that consumers can be lured into choosing green products. This has a two-fold benefit to the environment and the supplier.

Wittneben (2009) describes first movers as adventurous entrepreneurs / organisations seeking opportunities to capture the market. They will capitalise on any opportunity that they stumble on. Green opportunities present a monetary benefit for them. This will however be followed by substitute products and new entrants in the market.

Consumer marketers need to develop strategies which will allow them to overcome three problems associated with green marketing, namely poor credibility; consumer cynicism and consumer confusion (Mendleson and Polonsky 1995). If these problems cannot be overcome, it is questionable whether environmental marketing, as a whole, will be effective.

2.8 Green supply chain

Green supply chain strategies refer to efforts to minimise the negative impact of firms and their supply chains on the natural environment (Mollenkopf 2010). For implementation of environmental initiatives across the supply chain to be successful, co-operation between customers and suppliers is required. Barriers in a green supply chain includes supplier resistance and the lack of available data for measuring green practices. It is apparent however, that service

organisations can make a positive impact on the environment (Grove et al 1996). Kangun et al. (1991) in Grove et al (1996) discuss how advertisements and promotional messages that accurately describe the organisation's commitment to the environment, positively affect the image of the organisation and influence customer and supplier decisions to do business with the company. This helps in exposing the organisation and promoting it, assisting in the marketing of its products.

When the reduction of emissions in the short term becomes too costly, or the emissions are an integral part of the business, the option of carbon offsetting arises (Grove et al 1996). The intention of offsetting is to neutralise the emissions by setting up mitigation projects external to the business operations (Wittneben 2009). According to Pearson (2010, pg.4) "…measures to curb carbon emissions have led to the introduction of both taxes aimed at increasing the cost of environmentally unfriendly behaviour and income tax deductions rewarding environmentally friendly behaviour." Every organisation is different and requires a different approach to save the environment. With regard to office parks, a similar approach can be identified when compared with a manufacturing concern or a large chemical plant. Basic ideas around management of utilities, the 3 R's and education of staff can create a strong platform towards future progress.

2.9 Why organisations should incorporate climate change in business decisions

Political conditions influence business concern for climate change. The consideration of climate change is economically advantageous and attracts positive public relations. A new idea can achieve financial gains by introducing new goods or methods of production as innovative action results in monetary and other efficient methods. By understanding global warming and associated climate and weather change as driving forces for improving their positions as environmental stewards, businesses can gain valuable insight into what actions can be taken (Wittneben 2009). The author goes on to say that by identifying and measuring key factors that contribute to the carbon footprint of an

organisation, an enterprise provides a solid foundation for managing and reducing greenhouse gas emissions.

If an organisation determines which are the greatest contributors to their carbon footprint, management can evaluate all their options and rank; prioritise and target these areas with the intention to improve and optimise (Wittneben 2009). This could include replacement of inefficient machinery or replacement with machines that consume less energy.

A more sophisticated understanding of climate change can bring to the surface opportunities for a company to develop new products. Entirely new business segments can grow out of this and create higher value for new and existing clients and at the same time have a broad, positive impact on the environment (Olson 2009).

2.10 Commitment from top management

Schneider (2010) discusses Nedbank's commitment to the environment through its official Climate Change Position Statement. This statement commits the organisation to achieving its goal. The statement is public and exposes the organisation to the shareholders; suppliers and customers and commits it to meet targets for the reduction of waste, as well as the usage of essential resources. According to Schneider (2010), as the commitment from top management is set out, the voluntary staff members committing themselves have to be exposed as to the requirements of the statement. Every decision and action taken at a corporate or individual level includes due consideration of its potential impact on the environment. Nedbank's level of commitment towards the environment is confirmed in their new building in Sandton which is the first commercial building in South Africa to receive a green star rating from the Green Building Council of South Africa (Schneider 2010).

2.11 Green culture

Green initiatives and green buildings have the potential to shape and reinforce organisational culture (Brown et al. 2010). Creating a green culture often involves reinforcing behaviour that people already want to adopt, but there is still a need for the appropriate tools and training in order to change. Businesses that cultivate a green culture today are often immediately noticeable to outside visitors as unique, but at other times the differences in a green culture are imperceptibly small. According to Brown et al. (2010) the contemporary workplace is expected to provide a whole host of benefits including a reassuring atmosphere; compensation for the abstraction of work; protection of workers from stress; unification of the organisation and expression of organisational values.

Individuals may believe deeply that they should leave the world better than they found it and take steps to avoid damage to the earth, but there is still a limit to what people will commit to regarding such actions. In practice, safe corridors for the evolution of the climate system incorporate limits on the cost to be borne in carrying out mitigation and once cost considerations enter the picture, one is not so far from the balancing envisaged in cost–benefit analysis – though the way costs and benefits are weighed may be far different from a simple present value criterion (Toman 2005).

2.12 Employee awareness programmes

Determining and communicating an organisation's objectives to staff is recognised as a key motivator. According to Gupta and Sharma (1996), in Govindarajulu & Daily (2004) the environmental intentions of the organisation should be communicated, standards of performance and compliance set, and continuous improvement over time to archive a zero emission and waste goal monitored. The goals should be realistic; time based and continuously monitored (Schneider 2010). The author goes on to say that staff at different levels should be properly informed of the company's intentions and should be involved in decision making issues. Cleaning staff play a vital role in the green strategy

should be made aware of the strategy and at the same time their concerns should be addressed as well (Scheneider 2009).

Madsen and Ulhoi (2001 cited in Govindarajalu and Daily 2004) reveal that recent research suggests strongly that employees do not feel properly informed regarding environmental issues. Environmental programs; initiatives and goals of an organisation should be communicated frequently so the employees know what is expected of them.

2.13 Training and development of staff

Another vital element essential in signifying management's commitment to environmental improvement is the provision of specific and related training (Govindarajulu and Daily 2004). Managers should recognise the potential in employees and support the need for an individual development approach to training. It is also critical for managers to train new employees and continue educating of current staff (Donnelly 1994). The author goes on to say that managers should focus their training efforts on front-line employees and those who have a direct influence on the environment. This should not neglect other employees in the organisation. A company may enhance its ability to abide by environmental policy if it trains employees throughout the organisation. On adoption of a formal Environmental Management programme, senior administrators must address issues of organisational culture. According to Govindarajulu and Daily (2004), organisational culture is composed of a set of assumptions and values that guide individuals' daily work behaviours. They explain that employees will follow management's direction and whatever management does, and in what direction they push, and how hard they push dictates in which direction the organisation moves.

2.14 Motivation for staff

Govindarajulu and Daily (2004) describe how a well-designed reward system can be helpful in encouraging staff to perform sound Environmental Management practices. Donnelly (1994) found that the frequency and quality of communication

influences the impact on staff motivation and morale. An organisation can introduce “the employee of the month” rewards and recognition for the best green behaviour, or it can also introduce a reward system for the most innovative green ideas. Green policing can encourage staff to improve performance, at the same time the best ‘green police officer’ can be appraised.

Figure 2.3 Motivating factors for environmental performance

Source: Adapted from: Govindarajulu, N, and Daily, B. 2004. Motivating *employees for environmental improvement*, vol104, 364-372, (online Emerald)

According to Argyris (1998) in Govindarajulu and Daily (2004), a CEO once said: “No vision, no strategy can be achieved without able and empowered

employees". Empowered employees are motivated and committed to participate and engage in good environmental practices. Employees who are not empowered have less commitment to improvement than the empowered employees. This links motivation and training together. A well-trained employee and a well-motivated employee will ensure that the organisation and its green strategy are aligned. Commitment to living and working green and empowering staff to do the same in their lives (Schneider 2009). Employees cannot be disciplined or dismissed for "green" misconduct or poor "green" performance. Similar to the Occupational Health and Safety aspects of an organisation, staff are elected and perform these duties on a voluntary basis. In the same light the green staff have to also be chosen carefully in order to achieve the green goals. As well as motivating staff, control and performance have to be measured. This can become administratively arduous and time consuming.

2.15 Viability of recycling

If recycling saves resources, it should be less expensive than the alternative of virgin material production, single use and land filling (Duston 1993 cited in Tiemstra 2002). Virgin materials must be extracted from the ground, transported long distances and refined in order to be used. Recycled materials must be picked up and transported, separated from other materials and trash and processed with special equipment. The pecuniary values should indicate which approach makes more economic sense (Tiemstra 2002). With no additional cost for trash, people not only have no incentive to save money by putting waste in the recycling bin instead of the trash, but they have no incentive to reduce the total waste that they generate. A reward and penalty system for employees can increase and encourage recycling.

The recycling of bottles in beverage industries like ABI where one can return the empty for a deposit, and also the charging for plastic shopping bags present some form of incentive for recycling. Fullerton and Kinnaman (1992 in Tiemstra 2002) state that the best methods, however, would be to put a tax on materials on a level that would reflect the damage done by littering, offer free trash pickup

and then pay people to recycle. This service of recycling initiatives are being offered by various production organisations such as toilet paper manufacturers, where raw materials are becoming so scarce to obtain that they travel from site to site collecting waste which is valuable and is their main production material.

Lasana et al. (1991) and Carrol (1995) citied in Tiemstra (2002) mention that managers of recycling programmes have found that to increase recycling, the most important thing to do is to make it as convenient as possible. Recycling is voluntary and convenience is an important criteria. An example of this is the labelling of different collection containers to avoid confusion and frustration in segregated recycling. Constant clearing of these bins is also vital. As much as staff of an organisation are requested to recycle, the commitment from the manager of the recycling team has to be evident.

The recovery of waste from the waste stream is a very labour intensive activity and is also dangerous and unhygienic work (Berman 1996). Material recovery systems are machines that segregate waste with minimal human input. These systems include magnets; air separators and conveyor belts. In an office environment staff separate their waste themselves in waste collection bins which is labour intensive but free to the organisation and relatively clean. This waste is in turn sold to waste brokers and the profits used to recover some costs.

Berman (1996) mentions that for organisations to be successful, top management must make a strong and visible commitment to the programme as integral to the mission of the business. Tools necessary for the proper functioning of the programme have to be available and supervisors must be committed to keeping the programme visible to the workers and evaluating compliance.

Employees actively involved in environmental endeavours may significantly enhance a company's chance for superior environmental performance Govindarajulu and Daily (2004).

2.16 Feedback and review

The enthusiasm and interest that is often associated with project initiation and the early stages of implementation of an environmental programme may wane over time. Formal and informal feedback will help motivate employees towards environmental improvement. Govindarajulu and Daily (2004) stated that continuous feedback shows staff that they are being monitored and audited. Monitoring of performance, taking corrective action, identifying areas that require training and understanding problems that hinders performance are part of this process. Govindarajulu and Daily (2004) advise that discussing staff performance; what the current status is and where it should be; discussion of monetary values in savings and customer and quality satisfaction should form a part of the feedback.

2.17 Summary

This chapter has provided an overview of the involvement of organisations in the green office revolution. The literature review has contributed to the following constructs contained in the questionnaire: employee awareness; green culture; training and development (empowerment); feedback; review and rewards.

The literature review discussed the involvement of leadership, the motivating factors and government involvement in the greening of organisations. The commitment from top management, the control measures, training and commitment from staff are factors which will steer an organisation towards more environmentally friendly practices. The challenges from customers to submit green tenders and environmentally friendly products require more thought; research and development. This process becomes costly and time consuming. The various cultural backgrounds of South Africans also pose a barrier to staff education and motivation. Language is also a factor for concern.

The following chapter will discuss the research methodology proposed to address the green practices of Deloitte.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Chapter Two provided motivation for further research to be conducted on green office practices. This chapter aims to provide an overview of the methodological approaches and research design selected for application to a study on employee responses to Environmental Management practices in the organisation.

Research is a process that involves obtaining scientific knowledge by means of various objective methods and procedures (Welman, Kruger and Mitchell 2005). The term ‘objective’ indicates that these methods and procedures do not rely on personal feelings or opinions and that specific methods are used at each stage of the research process. Research methodology considers and explains the logic behind research methods and techniques. The concept ‘research’ is used to refer to the process of using scientific methods to expand knowledge in a particular field of study. This chapter examines the aim of the study; the objectives; construction of the questionnaire; sampling techniques; qualitative and quantitative methods; ethics in research and data collection methods.

3.2 Aim and objective of the study

The aim of this study was to determine employee responses at Deloitte towards Environmental Management practices. The study examined their involvement and their attitudes. The objectives of this study were:

- To determine if the company Environmental Management practices and policies had been communicated to staff
- To determine whether recycling zones had been established to facilitate the Environmental Management Policy
- To determine the amount of waste recycled
- To determine what waste had been recycled
- To determine whether employees were interested in; and committed to the Environmental Management Policy

3.3 Sampling

Sampling is the process of selecting a sufficient number of the right elements from the population, so that a study of the sample and an understanding of its properties or characteristics make it possible to generalise such properties or characteristics to the population elements.

3.3.1 Define the population

For the purpose of this study all staff who had access to e-mail at Deloitte Durban were invited to participate in the questionnaire. The total staff complement was 350. Staff that did not have access to e-mail was not included in the research. There are only five such staff.

All staff that have access to e-mail at the Woodlands Office were invited to participate in the questionnaire. The total complement of staff was 3000. The

number of staff who do not have access to e-mail is only 15 and they did not participate in the research.

Staff supervised includes permanent; casual and contract staff; all levels of employment; male and female. Permission from the Chief Financial Officer at the Woodlands Office and the Regional Leader at the Durban Office were obtained to conduct the study.

The Research Advisor's (2010) guideline using a confidence level of 95% and a margin of error of 5%, the sample size for the above population calls for a minimum of 350 respondents.
The questionnaire was sent to all staff in the Durban and Woodlands Offices. A total of 489 employees responded. The sample was not stratified according to the Durban and the Woodlands Offices as the respondents were all considered as Deloitte employees. Respondents were given approximately a month to respond and numerous reminders about completion were sent. The responses increased phenomenally when a senior manager encouraged staff to participate. It took almost two months to receive the final response of 489 staff.

3.3.2 Sampling frame

The IT department of Deloitte provided the sampling frame for all staff who had access to e-mails. The downside to this was that the list might not have been updated due to staff who had left and new staff entering the organisation and therefore may not be 100%. When the sampling frame does not exactly match the population coverage, error occurs (Sekaran and Bougie 2009). It did not pose a problem because the discrepancy between the target population and the sampling frame was small enough to be negligible.

3.3.3 Determining the sampling design

Probability sampling according to Sekaran and Bougie (2009) defines the elements of the population as having some known chance of being included in

the sample size. Non-probability sampling is when the elements in the population do not have certainty of being chosen as part of the sample.

3.3.3.1 Probability sampling

Welman et al. (2005) talks about examples of probability sampling. Single random samples are such that each subject of the population has the same chance of being included in the sample and each sample of a particular size has the same probability of being chosen. In stratified random samples, division into groups may be based on a single variable such as gender. It may also involve a combination of more than one variable.

Systematic samples are used if a sample is needed of n members from a population of N elements (units of analysis) that are numbered from 1 to N every N/nth element is included.

Cluster samples are used in large scale surveys were it is difficult to obtain lists of all members. It is the first step to pre-existing, heterogeneous groups. All the members of the selected cluster constitute the eventual sample.

3.3.3.2 Non-probability sampling

Welman et al. (2005) describes non-probability sampling as accidental or incidental samples, and the most convenient collection of members of the population who are near and readily available for research purposes. Purposive sampling is the most important type of non-probability sampling. Samples are obtained in such a manner that the sample may be regarded as being representative of the relevant population. Snowball sampling requires that a few individuals from the relevant population are approached. These individuals then act as informants and identify other members from the same population for inclusion in the sample.

Self selection sampling occurs when an individual is allowed to indicate their desire to take part in the research. In such cases, the following has to be done:

- publicise the need for cases either by advertising through appropriate media or by asking the individuals to take part
- collect data from those who respond

Convenience sampling, also known as haphazard sampling, entails selecting cases that are easiest to obtain for a sample. The sample selection process is continued until the required sample number is reached.

In the current study, simple random probability sampling was used. The reason being that each subject of the population had the same chance of being included in the sample and each sample has the same probability of being chosen.

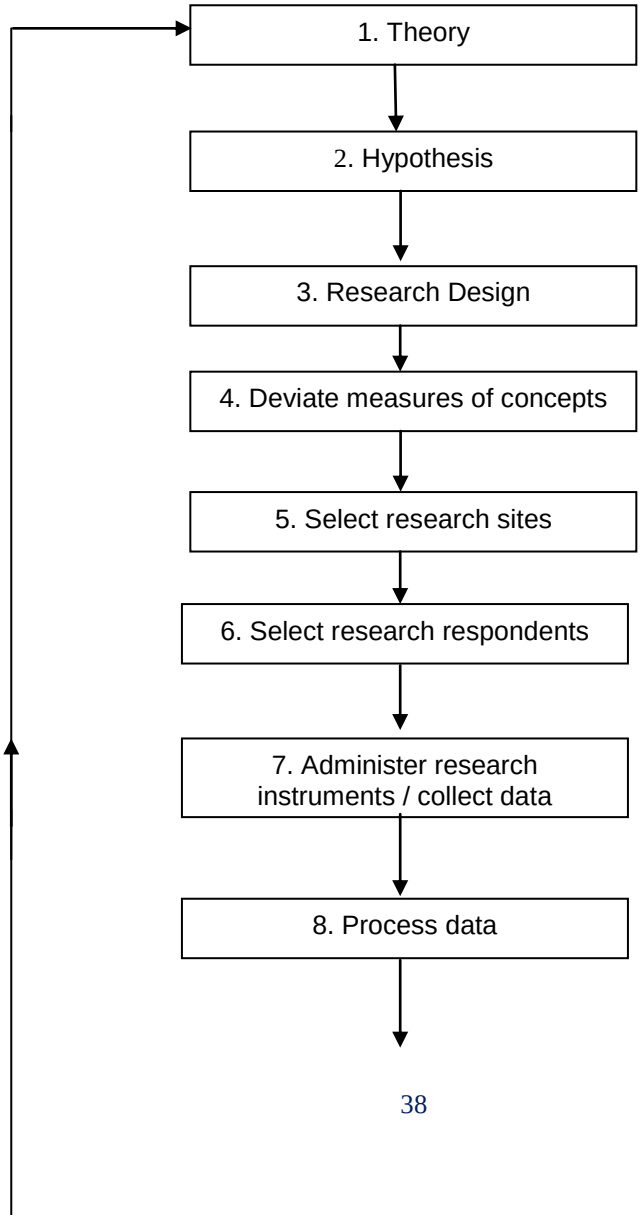
3.4 Research Methods

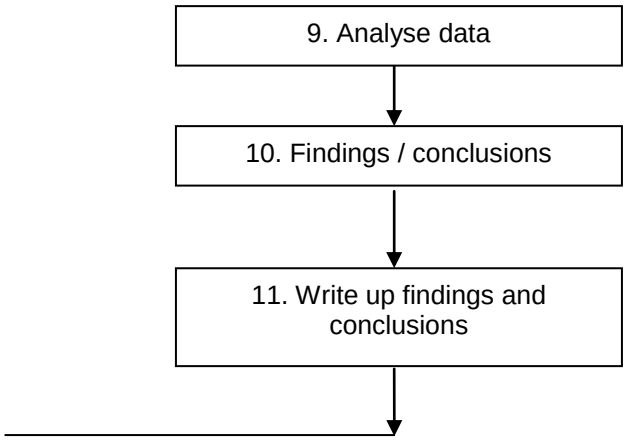
3.4.1 Quantitative research

Quantitative research is based on the philosophical approach known as logical positivism. Quantitative research underlines the natural-scientific method in human behavioural research and holds that research must be limited to what can be observed and measured objectively. It means, that which exists independently of the feelings and opinions of individuals (Welman et al 2005). The authors go on to say that natural-scientific approach strives to formulate laws that apply to populations and that explain the causes of objectively observable and measurable behaviour.

In this study, quantitative research has been used. Quantitative research evaluates objective data which consists of numbers, as opposed to qualitative research which deals with subjective data which are produced in the minds of the respondents. Another reason for using quantitative analysis was to explore the outsiders' perspective and keeping the research as stable as opposed to qualitative analysis were the insiders' views are taken into account and the research is dynamic and flexible. Bryman and Bell (2007) outline the main steps in quantitative research as illustrated in Figure 3.1. overleaf.

Figure 3.1 The process of quantitative research
Source: Bryman, A, Bell, E 2007. *Business Research Methods*, Second Edition, Oxford University Press





3.4.2 Qualitative research

According to Bryan and Bell (2007) the steps in qualitative research are outlined as follows. Starting out with general research questions and the types of questions that will be asked, the process is followed by selecting relevant sites and subjects, where the research will be carried out and on whom. Thereafter, collection and interpretation of relevant data is done. It is a conceptual and theoretical piece of work with tighter specification of the research question. The final collection of further data writing up findings and conclusions is the final stage of the process.

3.5 Ethics in data collection

Sekaran and Bougie (2009) discuss several issues with regard to collecting data. These pertain to those who sponsor the research; those who collect the data and those who offer participation research should be done to better the purpose of the organisation and not for any other self-serving reason. The confidentiality of the data collected should be respected by the researcher and the sponsor and not require individual or group responses to be disclosed. The sponsor should have an open mind in accepting the results and recommendations in the report presented by the researcher.

In this study, ethical clearance from the University of KwaZulu-Natal was obtained, gatekeeper's letters from Deloitte, the Woodlands and Durban offices granting permission to conduct the study, were received.

3.5.1 Ethics and the researcher

Sekaran and Bougie (2009) outline the ethics which the researcher should follow. Information should be treated confidentially. The nature of the study should not be misrepresented to subjects and the purpose of the study should be explained. Soliciting intrusive information should be avoided, but if the extraction of this information is absolutely necessary then it should be tapped with high sensitivity towards the respondent. The self-esteem and self-respect of the subjects should never be violated. Forcing someone to respond should be avoided. Respondents should not be exposed if the situation they are exposed to could inflict physical or mental harm. Misrepresentation and distortion during the reporting of the data should be eliminated. The researcher should be professional and responsible, use appropriate means of data collection, secure informed consent and no deception. Data should be carefully interpreted.

3.5.2 Ethical behaviour of respondents

The subject, having exercised the choice to participate in a study should co-operate fully in the tasks required, such as responding to the survey. In the research being conducted the introduction explains what the research is about, the terms and conditions and the time it will take to answer the questionnaire.

The respondent has an obligation to be truthful and honest in the responses. Misrepresentation or giving information knowing it to be untrue should be avoided (Sekaran and Bougie 2009).

3.6.Questionnaire and question design

3.6.1 The following questions will be answered in this study

- Have Environmental Management practices been communicated to staff?

- Have recycling zones been established?
- How much of waste is being recycled?
- What type of waste is being recycled?
- Are employees interested in Environmental Management practices?

A questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually within closely defined alternatives. Questionnaires are an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest. Questionnaires can be administered personally, mailed or electronically distributed (Sekaran and Bougie 2009). In this study electronic questionnaires were used.

3.6.2 Limitations of the questionnaire

Sekaran and Bougie (2009) describe the appropriateness of the content of the questions have to be taken into account and how they are worded taking into the level of sophistication and language used. Types of questions and their sequencing, as well as the personal data sought from respondents have to also be considered. In this research the above were taken into account to ensure an accurate and effective questionnaire.

3.6.3 Type and forms of questions

Open ended questions allow respondents to answer them in any way they choose. This means that there is no answer provided and the respondents will have to answer in their own words (Welman et al 2005). The advantage of this is that respondents were able to answer in own words with no limitations. The down side to this is data analysis becomes complicated. Closed ended questions as discussed by Welman et al (2005) allow respondents to make a choice from among a set of alternatives given. This questionnaire compromised only of closed ended questions. The advantages of this is that it helped the respondent to complete the questionnaire more quickly, as time is often a constraint. This format simplifies data analysis. The downside to this is that it limits respondents views or opinions. Positively and negatively worded questions as discussed by

Sekaran & Bougie (2009) are a mix of both. This type of questionnaire design helps to eliminate mechanical answering of the question. Both types of these questions were incorporated in the questionnaire.

Double barrelled and ambiguous questions lend themselves to different possible responses and confuse the respondent as he or she does not know exactly what is meant (Sekaran & Bougie 2009). Leading and loaded questions have been avoided. According to Sekaran & Bougie (2009), short simple questions are preferred to long complicated ones. None of the questions exceeded twenty words.

3.6.4 Structure of the questionnaire

The first page of the questionnaire is the informed consent page, detailing the topic; terms and conditions of the research as well as the details of the Graduate School of Business and Leadership (University of KwaZulu-Natal), the supervisor and the researcher. For the respondent to continue, he or she has to click on the "I agree" option which will then allow access to the questionnaire. The questionnaire progresses from demographic questions to questions that are specific to the topic. Questions asked about the respondent and their personal views.

The questionnaire then focuses on the respondent's knowledge of the company's initiatives relating to the study. The questions lead to the role which the respondent plays in the topic under study. The questionnaire ends by asking the respondent's opinions. The questions lead from being simple to complicated. The questions lead from observation of the activities in the organisation to the involvement of the individual in the activities then the opinions of the respondents towards the organisation.

The questionnaire incorporates:

- Multiple choice – one answer only
- Multiple – more than one choice

- Yes / no (nominal)
- Likert scale
- Numerical scale

3.6.5 Validity

Validity refers to the extent to which a test measures what the researcher wishes to measure. The two validity tests that were used were content validity and construct validity. The content validity was established by conducting a pilot study as outlined in Section 3.6.7. The constructs of this study were confirmed by managers of the company and were supported by the research supervisor.

3.6.6 Reliability

Reliability is concerned with the findings of the research and relates to the credibility of the findings. To determine if the findings are reliable, the following question needs to be asked: Will the evidence and conclusions stand up to the closest scrutiny?

If a research finding can be repeated, it is considered reliable (Bryman and Bell 2007). Reliability is particularly an issue in connection with quantitative research. The quantitative researcher is likely to be concerned with the question of whether a measure is stable or not. The reliability of the questionnaire is determined from the use of an instrument. Cronbach Alpha is an often used test for reliability of a research instrument but is limited in that it is mainly used on Likert and Likert type questions (Gliem and Gliem 2003).

Estimating reliability: If a research finding can be repeated, it is reliable (Bryman and Bell 2007). Reliability is particularly an issue in connection with quantitative research. The quantitative researcher is likely to be concerned with the question of whether a measure is stable or not. The reliability of the questionnaire was determined from the use of an instrument. Cronbach Alpha is an often used test

for reliability of a research instrument. Cronbach Alpha is limited in that it can mainly be used on Likert and Likert type questions (Gliem and Gliem 2003). The ten questions which used Likert type questions were analysed and returned an alpha = 0.917. Based on the scale provided by Gliem and Gliem (2003), this suggests excellent internal consistency and hence the questionnaire can be accepted as a reliable instrument for collecting reliable data.

3.6.7 Pre-testing of the questionnaire

A pilot study was conducted with eight students in an MBA class. This tested the context validity and discovered other faults such as vague and ambiguous questionnaire wording. After the pilot study, the questionnaire was revised and then issued to respondents.

3.7 Data collection techniques

3.7.1 QuestionPro

In this study QuestionPro was selected for data collection. QuestionPro is an online survey application where the researcher constructs and disseminates questionnaires online. QuestionPro is suited for researchers who need to conduct research online or collect feedback of any kind. Getting responses through paper surveys and doing it online are two completely different things. On the internet it is easier and quicker to reach out to people and receive their responses. The questions shown further in the questionnaire can be changed based on the answers provided to the earlier questions, making the questionnaire dynamic. Its analysis display is instant and the target respondents are numerous and varied. However, from the respondents perspective, it is easier to deny the request to provide a response, not provide answers to certain questions, abandon the survey or unknowingly provide an answer that isn't true.

3.7.2 Features of QuestionPro

Branching, skip logic and hide logic gives one the ability to create intelligent surveys. Using branching / skip logic, one can ensure that only relevant questions are displayed to the intended respondents. This assists in the sense that questions that should not be answered will not be accessible to the respondent. In the case when a respondent is trying to complete the questionnaire without understanding the questions, answering in contradiction will be avoided thus avoiding corrupted statistics.

This feature also assists when a question is to be displayed or not depending upon a complex (or simple) criteria. This feature can be used instead of branching / skip logic. Based on a preceding question, respondents were either shown the next question or taken to another question which followed - example, if a respondent answered NO to a question, the following question would be different from someone who answered YES to the same question. Skip and hide logic ensures that respondents don't answer questions not intended for them thus eliminating the collection of unnecessary data as is often the case with manual questionnaires.

3.8 Analysing of data

3.8.1 Descriptive statistics

Descriptive statistics are concerned with the description of data obtained for a group or individual units of analysis Welman et al. (2005). After data is obtained through questionnaires, it needs to be coded; keyed in and edited. This means a categorisation scheme has to be set up before the data can be captured. The issue of outliers, inconsistencies and blank responses have to also be addressed. Each stage of the analysis is discussed.

3.8.2 Coding and entry of data

Data coding involves assigning a number to the participant's responses so that the response can be entered into a database. A coding sheet can be incorporated to transcribe the data from the questionnaire and then capture the data. This method avoids confusion especially when there are many questions and a large number of questionnaires. Data coding was done automatically by QuestionPro.

3.8.3 The principles of data protection

In Jankowicz (2005) the principles of data processing by the researcher are outlined. These will be taken into account in this project. All data will be secure; fairly; accurately; adequately and lawfully processed for limited purposes only. The data will not be kept longer than necessary and was processed in accordance with the data subjects' rights. In terms of the University of KwaZulu-Natal policy, data will be stored at the University for five years.

3.8.4 Histograms and bar charts

Histogram and bar charts are diagrams in which columns or sections represent frequencies of the various ranges of scores or values of a quantity (Welman et al. 2005). These have been used to provide an overall image of the description of the units of analysis as a whole group.

3.8.5 Correlations and cross tabulations

Correlations are used to describe relationships between variables such as age; income etc. Correlations estimate the extent to which the changes in one variable are associated with changes in another variable (Welman et al. 2005). A positive correlation reflects a direct relationship: one in which an increase in one variable corresponds to an increase in the other variable. Two variables that are indirectly or inversely related would produce a negative correlation, indicating that an increase in one variable is associated with a decrease in the other (Welman et al. 2005). Correlations were used where necessary.

3.9 Summary

This chapter has presented a detailed account of the research philosophy and methodology according to which the research was be conducted. The aim; objectives; the design of the questionnaire and the tool used to gather the data were outlined. The coding and preparation of data were covered. In the next chapter, analysis of the data will be examined. A statistical software programme, SPSS (Statistical Package for the Social Sciences) was used for in-depth data analysis.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF RESULTS

4.1. Introduction

In this chapter the results of the study are presented in the form of comprehensive tables; cross tabulations and bar charts. The data is presented in a manner to satisfy the objectives of the study. Other studies related to this study will be incorporated in explaining the findings. The results are analysed as a group and not segmented to differentiate between the Durban and the Woodlands Offices, as it is expected that policies are implemented uniformly across the organisation. However, where it was found that there were deviations between these offices, they were highlighted to show the inconsistencies. This was not intended to be a comparative study.

4.2 Demographics

n=489	Demographic Details	
	Description	**Percentage**
	Gender	
	Male	44.2%
	Female	**55.8%**
	Age	
	18-27	**35.1%**
	28-37	32.4%
	38-47	19.2%
	48-57	9.2%
	58+	4.1%
	Race Group	
	Asian	19.1%
	Black	19.1%
	Coloured	3.7%
	White	**57.3%**
	Other	0.8%
	Employment	
	Permanent	**80.3%**
	Casual	0.6%
	Contract	19.1%
	Level in Organisation	
	Non-management	**45.4%**
	Junior Management	18.1%
	Middle Management	16.4%
	Senior Management	20.1%
	Office Base	
	Durban Office (n = 88)	18.1%
	Woodlands Office (n = 401)	**81.9%**

Table 4.1 Demographics of the sample (The Woodlands and Durban Combined)

It is evident from Table 4.1 that the majority of the respondents were female (55.8%) and were mainly aged 18-27 (35.1%). Whites (57.3%) were the largest race group who participated in the study. It is clear that mainly non-management (45.4%) and senior management (20.1%) level employees participated in the study. The Woodlands Office accounted for 82% of the respondents as their population is greater than the Durban Office.

4.3. Communication of company Environmental Management practices and policies

4.3.1 Commitment to the green office policy statement

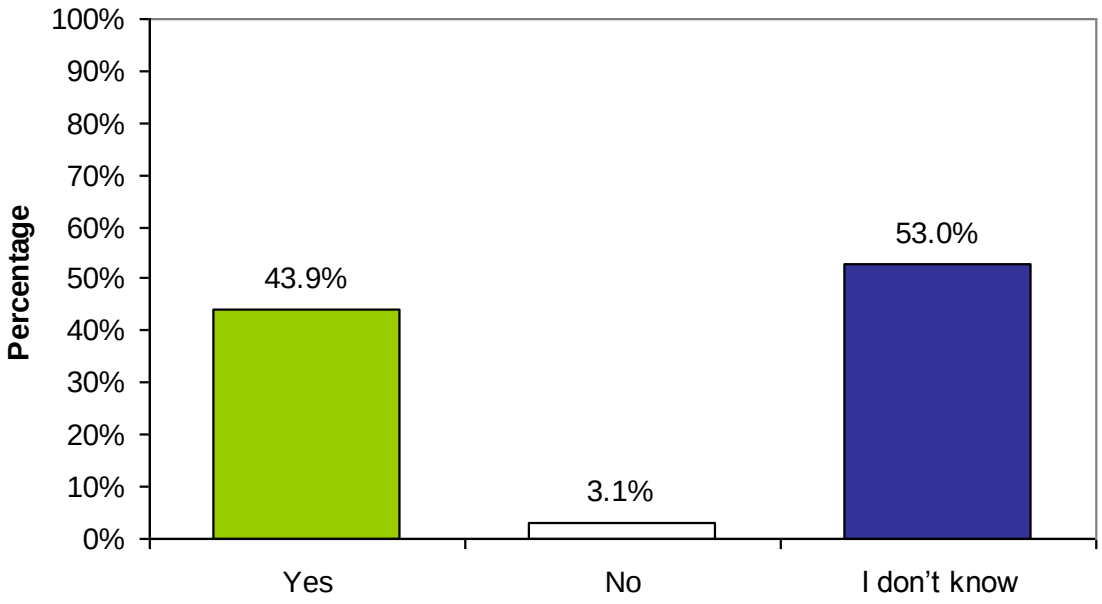


Figure 4.1 Employee awareness of the green office policy statement

Figure 4.1 shows that more than half (53%) of the respondents were not aware that there was a commitment to a green office in the organisation policy statement.

In Govindarajulu and Daily (2004) Madsen and Uhoi (2001) it was mentioned that environmental programmes; initiatives and goals of an organisation should be communicated frequently so the employees know what is expected in order to accomplish the goals. Recent research suggests strongly that employees do not feel properly informed regarding environmental issues (Govindarajulu and Daily 2004; Madsen and Uhoi 2001).

4.3.2 Employee awareness of green initiatives

N=489		Employee Awareness of Green Initiatives				
		Strongly Disagree	Disagree	Agree	Strongly Agree	**Total**
Description	I am aware of Environment and Green Issues	5.5	25.3	54.5	14.7	100
	Management have addressed Green Office	5.1	35.7	47.8	11.4	100
	Management have formed a Green Committee	8.2	49.1	32.7	10	100

Table 4.2 Initiatives of which employees were aware

In Table 4.2 it is evident that the majority of staff (54.5% and 47.8% respectively) were aware of green initiatives and that Management had addressed the green office initiatives with them. Almost half (49.1%) in the third category reported that they disagreed that Management had formed a green committee.

Mee and Clewes (2004) revealed four classes of educational material that may be needed in addressing environmental issues: addressing pro-recycling attitudes; specific information and awareness; reinforcing the idea that every

individual's action counts and addressing forgetfulness. These can be done by newsletters; reminders; the intranet and personal communication. The authors concluded that the following pro-recycling attitudes should be addressed and that staff should accept personal responsibility for waste and each staff member should understand the saliency of the issue.

As Mee and Clewes (2004) illustrate the manner in which management should address environmental issues, they also outline that staff members should acknowledge personal responsibility for their actions. This means that staff should not act according to what management has requested but act out of personal responsibility.

4.4 Greening efforts reports

N=489		Company Greening Reports					
		Never	Rarely	Sometimes	Usually	Always	**Total**
Description	Deloitte provides me with regular reports on greening efforts	23.8	27.8	30.3	13.2	4.9	100
	How often do you read the company Greening Reports	24.5	29.7	24.5	14.3	7	100

Table 4.3 Report on greening efforts

It is evident from Table 4.3 that the majority of staff (27.8 and 29.7% respectively) reported that they were rarely provided with greening reports and rarely did they read the reports. What is of greater concern is that more than one fifth (23,8%) never received the reports and almost a quarter (24,5%) never read them. 81.9% of staff responded "NOT REALLY" and only 21.3% bother to read the greening

reports. The behaviour of the staff members are contrary to the Mee and Clewes (2004) guidelines.

N=489		Deloitte provides me with regular Greening Reports					
		Never	Rarely	Sometimes	Usually	Always	**Total**
Level in organisation	Non-management	10.5	9.4	15.5	6.3	2.3	44
	Junior Management	4.4	7.5	4.1	1.3	1	18.3
	Middle Management	3.6	6.3	4.8	1.7	0.4	16.8
	Senior Management	5.4	4.6	5.9	4	1	20.9
	Total	23.9	27.8	30.3	13.3	4.7	100

Table 4.4 Cross tabulation of level in organisation and provision with greening reports

Table 4.4 indicates that the majority of staff (19.9%) who answered that they were never or were rarely supplied with green reports were from the non-management level. Non-manangement were also responsible for the majority 8.6% who had answered usually and always. It is also evident from Table 4.4 that 51.7% of the respondents rarely (27.8%) or never (23.9%) received greening reports.

N=489		How often do you read the company Greening Reports?					
		Never	Rarely	Sometimes	Usually	Always	**Total**
Level in organisation	Non-management	9.9	14	12.2	4.9	3	44
	Junior Management	6	6.6	2.8	2.2	0.8	18.4
	Middle Management	4.9	4.1	4.9	1.9	1.6	17.4
	Senior Management	3.6	4.9	4.9	5.2	1.6	20.2
	Total	24.4	29.6	24.8	14.2	7	100

Table 4.5 Cross tabulation between level in organisation and reading green reports

As shown in Table 4.5 more than half of staff (54%) did not read the greening reports regularly. It is of concern that non-management and junior management hardly read the reports. Of equal concern is that only 7% of the respondents across all levels always read the reports.

N=489		How often do you read the company Greening Reports?					
		Never	Rarely	Sometimes	Usually	Always	**Total**
Race	Durban Office	9	19.1	28.1	25.8	18	100
	Woodlands Office	29.5	33.1	23.3	10.5	3.6	100

Table 4.6 Cross tabulation of greening reports and office respondent base

It is evident from Table 4.6 that the majority (71.9%) of the Durban office respondents read the reports regularly (28.1% sometimes, 25.8% usually and18% always) in contrast with the Woodlands Office where only 37.4% read the reports regularly. A concern for management is that almost two thirds (62.6%) seldom read the greening reports.

N=489		Why do you not read the reports more often?					
		I have no time	I have no interest	Responsibility of others	Reports too difficult	Insufficient details	**Total**
Age	18-27	31.1	8.3	0	1.1	6.7	47.2
	28-37	16.6	3.6	0.5	1.6	9.3	31.6
	38-47	10.9	1.6	0	0.5	2.6	15.6
	48-57	3.6	0.5	0	0	0.5	4.6
	58+	0.5	0	0	0	0.5	1
	Total	62.7	14	0.5	3.2	19.6	100

Table 4.7 Reasons for not reading reports more often

Table 4.7 reveals that 62.7% of the staff had no time to read the reports with the majority in the 18-27 age group, 8.3% in the same age group had no interest in reports. As respondents age increased, fewer respondents did not read the report.

The environmental goals of the company should be communicated to the workers. Standards of performance, especially with respect to environmental concerns, must be subject to continuous improvement over time to reach the goal of zero emission and zero waste Govindarajulu and Daily (2004)

As Govindarajulu and Daily (2004) outlines that the company environmental goals should be communicated, as this will help staff prioritise around these issues. From Table 4.7 above it is clear that time allocation has a part to play in the respondents' inability and unwillingness to read the reports.

N=489		Why do you not read the Green Reports more often?					
		I have no time	I have no interest	Responsibility of others	Report too difficult	Insufficient details	**Total**
Office	Durban office	87.5	4.2	0	4.1	4.2	100
	Woodlands office	59.2	15.4	0.6	3	21.8	100

Table 4.8 Cross tabulation of office and reading of reports

In Table 4.8 majority of staff (87.5%) at the Durban Office reported having no time to read the company Green Reports. The Woodlands Office revealed a similar situation with the majority (59.2%) not having sufficient time to read the reports.

N=489		Is there any commitment to Green Office policy in the Deloitte Policy statement?			
		Yes	No	I don't know	**Total**
Age	18-27	12.7	1.2	21.5	35.4
	28-37	11.7	0.4	19.4	31.5
	38-47	11.2	0.6	7.8	19.6
	48-57	5.6	0.7	3.1	9.4
	58+	2.7	0.2	1.2	4.1
	Total	43.9	3.1	53	100

Table 4.9 Acknowledgment of commitment to green office in policy statement

From Table 4.9 it is evident that age group 18-27 were not aware of the commitment to green policy in the organisation policy statement. A concern is that more than half (53%) of the respondents were not aware of the commitment to green office in the organisation Policy statement. According to Argyris (1998 in Govindarajulu and Daily 2004), top management decides the environmental policies to establish as well as the level of training and communication required.

N=489		Is there any commitment to Green Office policy in the Deloitte Policy statement?			
		Yes	No	I don't know	**Total**
Level in Organisation	Non-management	18.2	1.4	24.9	44.5
	Junior Management	7.6	0.8	9.8	18.2
	Middle Management	6.1	0	10.4	16.5
	Senior Management	11.9	0.8	8.1	20.8
	Total	43.8	3	53.2	100

Table 4.10 Cross tabulation of acknowledging policy statement and level in organisation

In Table 4.10 the majority of respondents (24.9%) who did not know of any commitment in the organisation policy statement to green office practices came from the non-management level. Middle management (10.4%) were the second highest but of concern is that some senior management (8.1%) did not know about this which conflicts with Argyris found (1998 in Govindarajalu & Daily 2004).

N=489		Is there any commitment to Green Office in the Deloitte Policy Statement?			
		Yes	No	I don't know	**Total**
Office Base	Durban Office	70.6	2.2	27.2	100
	Woodlands Office	37.5	3.3	59.2	100

Table 4.11 Cross tabulation of office base and acknowledgement of policy statement

In Table 4.11 the majority (70.6%) that answered yes came from the Durban office. The majority who indicated that they did not know about the commitment in the policy statement came from the Woodlands Office.

N=489		How often do you read the company Greening Reports?				
		Strongly disagree	Disagree	Agree	Strongly Agree	**Total**
Office	Durban Office	1.1	3.2	52.2	43.5	100
	Woodlands Office	6.5	30.5	54.9	8.1	100

Table 4.12 Cross tabulation of awareness and office

Table 4.12 reveals that in the Durban Office 95.7% of the staff were in agreement that they were aware of environmental and green initiatives in the workplace. At the Woodlands Office, 63% of respondents were in agreement that they were

aware of environmental and green initiatives in the workplace. What is of concern is that more than one third (37%) in the Woodlands Office were unaware.

N=489		Management have addressed the issue of a Green Office environment				
		Strongly disagree	Disagree	Agree	Strongly Agree	**Total**
Office	Durban Office	1.1	4.3	60	34.6	100
	Woodlands Office	6	43.1	44.8	6.1	100

Table 4.13 Cross tabulation of management addressing green issues and office

In the Durban Office 94.6% of respondents agreed that management have addressed the issue of a green office environment. In the Woodlands Office 50.9% of respondents agreed on this. It is a concern that Durban staff were more informed than the Woodlands staff.

4.5 Determine whether recycling zones have been established

4.5.1 Waste segregation in the office

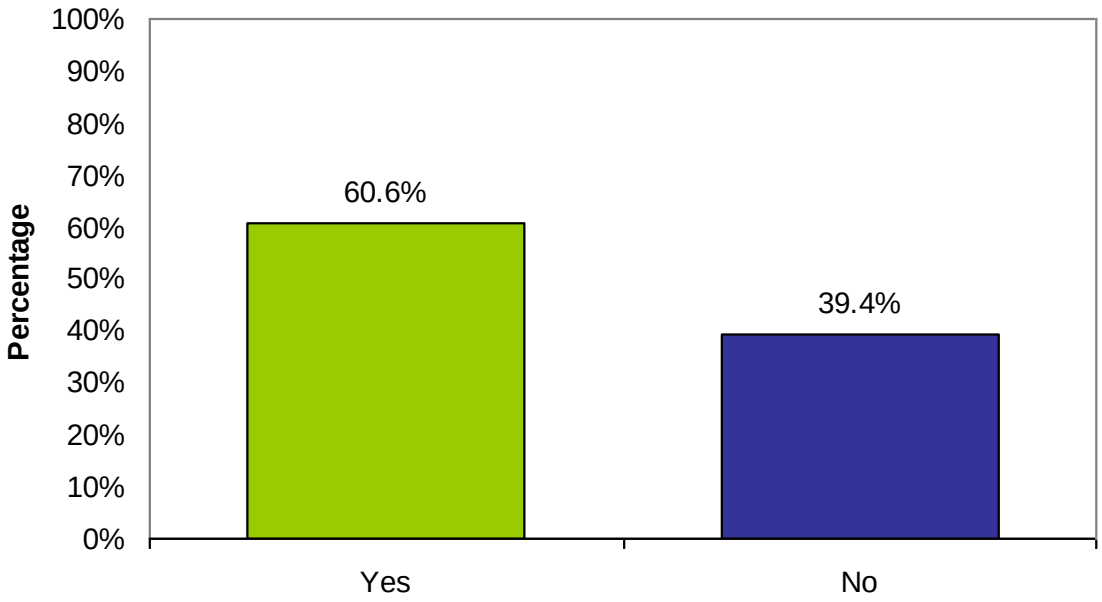


Figure 4.3 Response on waste segregation in the office

Figure 4.3 depicts that more than half of respondents (60.6%) responded that there was waste segregation in the office. It is evident those environmental issues are being addressed by the organisation and that the organisation has arranged for waste segregation facilities and contractors. In the King Code 3 on corporate governance it states “no one wants to invest in an unsustainable company” and emphasises sustainability from a perspective of social and environmental responsibility (Freemantle 2010).

4.5.2 Waste separation analysis

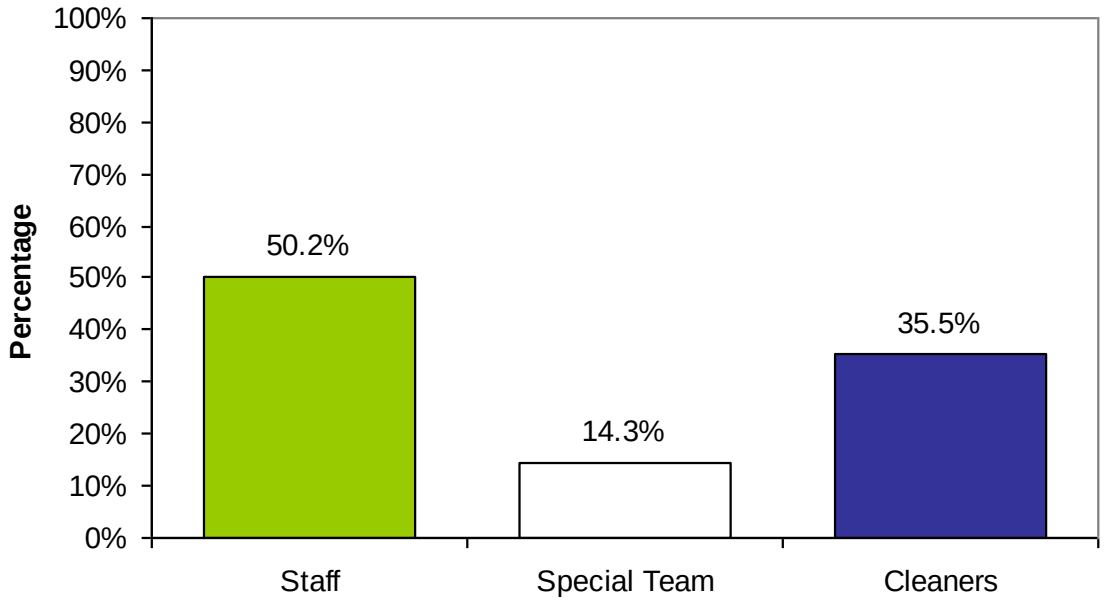


Figure 4.3 Analysis of waste separation

In Figure 4.3 half of the respondents (50.2%) are recycling on their own. The balance is made up of 35.5% cleaners and the minority of 14.3% from an outsourced company.

4.5.3 Staff response to recycling zones

N=489		Staff response to Recycling Zones				
		Strongly Disagree	Disagree	Agree	Strongly Agree	**Total**
Recycling	I know were the recycling zone is situated	1.4	12.3	56.8	29.5	100
	The recycling zone is easy to use	0.7	13	57.5	28.8	100

	The recycling zone is hygienic	0.7	14.4	58.2	26.7	100
	I know how to use the recycling zone	1.4	15.7	54.1	28.8	100
	I do recycling willingly	0.0	6.2	59.6	34.2	100

Table 4.14 Comprehensive table of staff responses on recycling zones

Table 4.14 is self explanatory. In terms of recycling the majority of staff knew where the recycling zone was, it was easy to use; hygienic and they (93.8%) were willing to recycle. The willingness to recycle ties in with the hypothesis of Mee and Clewes (2004). Specific training involves showing staff how to achieve waste segregation and the use around recycling stations. Continual efforts mean that once off training may not be adequate.

At some companies, discarding an empty beverage container any place other than a designated recycle bin makes employees uncomfortable. Still other companies are able to measure and report the quantity of recycled office-use paper as a percentage of new paper purchased through its procurement organisation, and they set performance targets to increase the amount of recycling as part of continual improvement efforts. Recycled paper that is purchased by outside vendors is often considered a revenue stream for the company (Olson 2008). The author suggests that in order to encourage waste recycling, appropriate waste and recycling receptacles should be placed were they are most likely to be used. It is evident that Deloitte complies with this as the recycling zone was known by 86.3% of the respondents.

On adoption of a formal environmental management programme, senior administrators must address issues of organisational culture. Organisational culture is composed of a set of assumptions and values that guide individuals'

daily work behaviours (Govindarajulu and Daily 2004). The author's mention that incorporating an Environmental Management programme in the organisational culture will help guide the individuals work behaviours. In the same fashion, successful environmental improvement mandates employees receive thorough training. Insufficient training may result in employees who are unable and unwilling to participate in environmental improvement efforts. A green strategy fosters a common culture of awareness and action (Olson 2008). Creating a green culture often involves reinforcing behaviour that people already want to adopt, but there is still a need for the appropriate tools and training in order to change. As Olson (2008) mentions, the culture reinforces behaviour that people want to adopt, there is still a vital input required by the organisation and that is the appropriate tools and training in order to create this change.

4.6 Determining the type and amount of waste being recycled

N=489		Combination of Waste Collection									
		<1kg Dbn	<1kg Wdls	1kg Dbn	1kg Wdl	2kg Dbn	2kg Wdl	3kg Dbn	3kg Wdl	>3kg Dbn	>3kg Wdl
Category of	Paper	90.6	86.6	7.8	7.3	0	3.7	0	1.2	1.6	1.2
	Glass			95.3	98.8	3.1	0	1.6	1.2		

	Plastic			96.9	97.6	1.6	1.2	1.6	1.2		
	Cans			96.9	95.1	1.6	3.7	1.6	1.2		

Table 4.15 Combination of Woodlands and Durban office waste collection

Table 4.15 reveals that although the population size has a huge variance between the Woodlands Office and the Durban Office, the recycling habits are almost equivalent. This raises great concern as a ratio of 1:10 could be established in terms of waste recycling.

4.7 Employee interest in environmental management practices

N=489		Environmental Practices are Important in our workplace				
		Strongly disagree	Disagree	Agree	Strongly Agree	Total
Office Base	Durban Office	0	1.1	52.2	46.7	100
	Woodlands Office	2.8	6.5	64.7	25.9	100

Table 4.16 Response to the importance of environmental practices and office base

It is evident from Table 4.16 that the majority of respondents at both offices felt that environmental practices are important in the workplace. Olson (2008) stated that if a communication and change management plan is developed this could assist in raising interest among staff. The author goes on to say that successes need to be communicated early and often companies should build a knowledge portal and share lessons learned. A question and answer or suggestion board will aid this as well.

N=489	I believe that Employee Green Practices should…

		Not be monitored	Be monitored	Be monitored and penalties imposed	**Total**
Age	18-27	5.9	20.7	8.6	35.2
	28-37	3.8	21.5	6.5	31.8
	38-47	4.4	12.1	3.1	19.6
	48-57	1.5	6.1	1.7	9.3
	58+	0.8	2.9	0.4	4.1
	Total	16.4	63.3	20.3	100

Table 4.17 Cross tabulation on monitoring of green practices and age

In Table 4.17 the majority (63.3%) of the respondents felt that employee green practices should be monitored. In the age group 28-37, the highest (21.5%) response was recorded. It is evident that a fifth (20.3%) of the respondents took green practices seriously enough to want penalties imposed on defaulters.

4.8 Green efforts being implemented

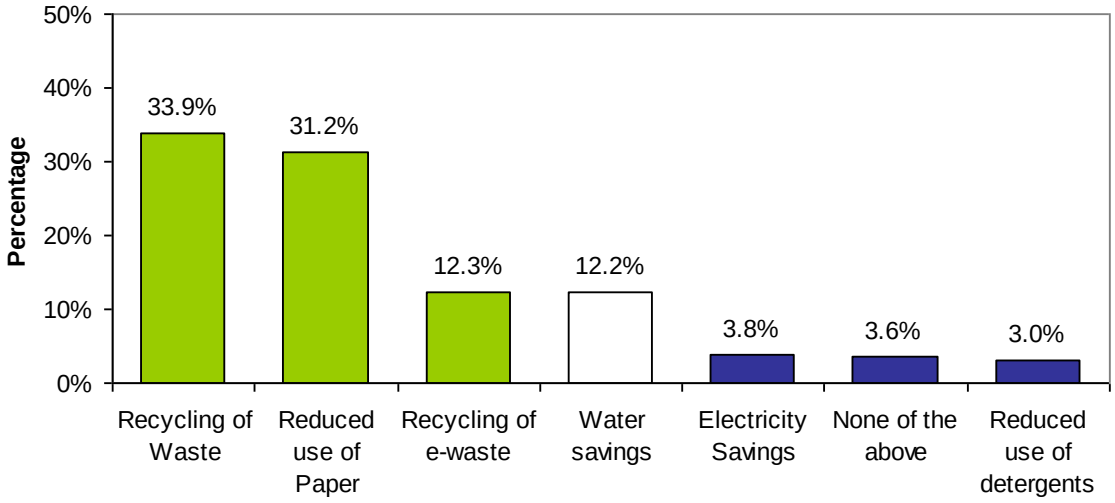


Figure 4.4 Implementation of green efforts

It is evident from Figure 4.4 that recycling of waste (33.9%) was the main initiative, followed by paper recycling (31.2%). A minority of (3.6%) reported that they were not involved in any recycling programmes.

4.8.1 Staff perceptions of green rewarding systems

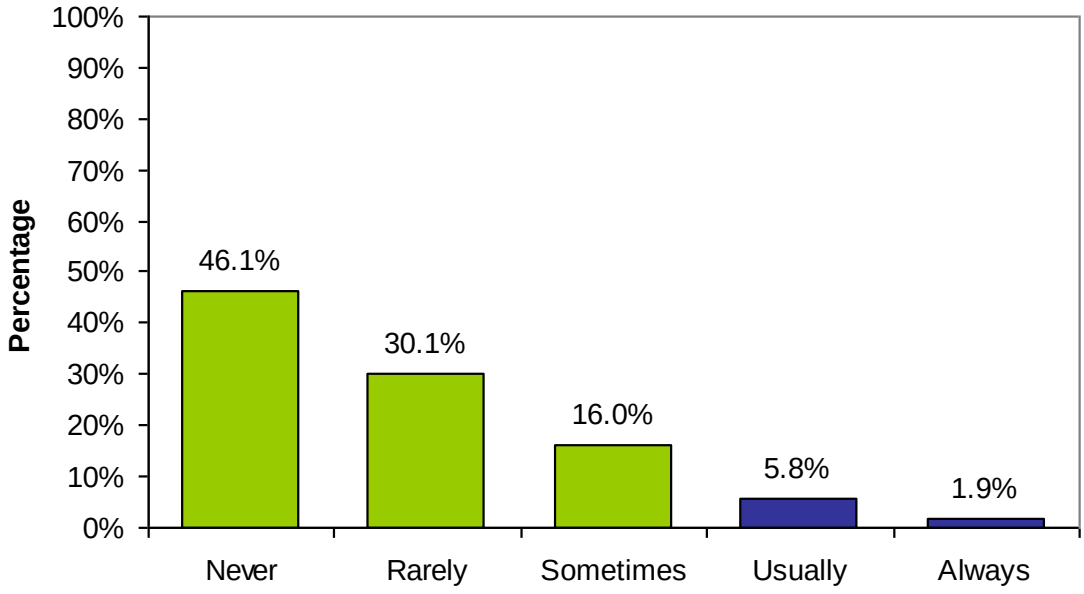


Figure 4.5 Perceptions of green rewarding systems

The majority of respondents (46.1%) reported that the organisation never rewards staff for their green efforts, 31.1% reported that rewarding was done on the rare occasion, followed by 1.9% of the respondents that reported the organisation always rewards green behaviour.

According to Govindarajalu and Daily (2004), a well-designed reward system can be helpful in encouraging employees to perform sound environmental practices. Rewards can be a reinforcement to continuously motivate and increase commitment from workers to be environmentally responsible (Govindarajalu & Daily 2004). The authors go on to say that reward systems can have a positive impact on behaviour and they help move closer to the desired situation the organisation intends reaching.

4.9 Summary

This chapter presented the data that was obtained from the questionnaire. The results were presented in different formats, through graphical presentation; tables and bar charts. The questions were presented according to the relevant objective and displayed the percentages obtained from analysing the responses. The graphical presentations; tables and bar charts aided the understanding of the responses and showed common trends.

The salient findings were the variances in perceptions and actions at the two offices. It seemed that there was not one unified strategy for the entire organisation. The regions were operating as silos. The majority of the respondents were permanently employed by the organisation. It was also noticed that Woodlands management had not addressed the issues of green office as well as the Durban Office had. Overall, respondents were interested in Environmental Management issues but were not given enough opportunities to exercise their commitment to the environment and were not rewarded for their support and participation.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter the limitations; recommendations; topics for further research and issues that were not covered in this research will be discussed. The chapter will go on and illustrate the ideas that can be incorporated in order to start addressing the short comings at the Deloitte branches surveyed.

5.2 Findings of the study

The aim of this study was to understand the environmental practices of Deloitte at two regional offices. These findings will assist management to improve current practices and promote consistent greening measures at the offices.

Objective 1: To determine if the company Environmental Management practices and policies have been communicated to staff.

It was found that the majority (69.2%) of staff were aware of environmental and green issue, 59.2% agreed that management had addressed the matter of the green office in the organisation.

It is concluded that the majority of staff were aware of environmental and green issues but these intentions were not communicated to all staff as 40.8% did not receive any commitments to green office.

The recommendation is that a better communication plan be set for travelling staff or staff working out at clients.

Objective 2: Determine whether recycling zones have been established to facilitate the Environmental Management policy.

It was found that 60.6% of staff agreed that facilities for waste segregation in the office had been implemented. The balance of 39.4% were in disagreement.
It is concluded that majority of staff were exposed to the recycling campaigns. The balance that was in disagreement may not have been exposed to communications or made aware of these facilities.
The recommendation is that the barriers to the communication have to be identified addressed and corrected.

Objective 3: Determine the amount of waste being recycled.

It was found that similar amounts of recycling took place at both branches.
It is concluded that paper, glass, plastic and cans were consistently recycled by both branches.
Due to the fact that the Woodlands Office is much larger, the volume in recycling should be much greater than the Durban Office. More effort is required to encourage staff to recycle at the Woodlands Office.

Objective 4: Determine what waste is being recycled.

It was found that all categories of waste were recycled suggesting that there is a facility for all recyclable waste. It is concluded that the recycling zones are being used and that waste is recycled.
The recommendation is that although there are recycling stations available, the creation of waste must be reduced. For example, polystyrene cups could be replaced with re-washable mugs.

Objective 5: Determine whether employees are interested and committed to the Environmental Management policy.

It was found that 75.5% of staff read the greening reports. Almost a quarter of respondents (24.5%) reported that they never read the greening reports with

62.7% of staff responding that they had no time to read reports. More than half (53%) of staff reported that they did not know of the commitment to green office in the Deloitte Policy statement.

Half the respondents (49.8%) stated that waste separation was done by a special team and cleaners. Only 50.2% reported that staff did the waste separation themselves.

It is concluded that more staff read the green reports but fewer staff were aware of the Policy statement and even fewer did the waste separation themselves.

The recommendation is that there is room for improvement as more staff should be reading the green reports. More staff should be exposed to the Deloitte policy statement and they should be encouraged to do waste separation themselves. Staff must attend compulsory green briefing sessions on a monthly basis. Staff who attend all twelve sessions should be awarded, attendance of six onwards should be acknowledged and staff that attend less than six should be issued with a warning of non-compliance.

Objective 6: Identify green practices at Deloitte.

It was found that 57.3% of staff disagreed that they were aware of green committees in the organisation.

It is concluded there is a communication barrier towards the greening objectives in the organisation.

The recommendation is that communication of the green campaign should reach all staff.

5.3 Recommendations based on findings

5.3.1 Deloitte policy statement

Since the majority of the Woodlands Office responded that they did not know of the commitment to green office from management, this could either mean that the Deloitte Policy statement is not displayed at the various buildings or that staff have not been motivated to read and understand it. This can be addressed by re-induction training of existing staff; in re-induction of new staff and by conducting regular training programmes; communication thoughts and better use of the intranet and posters to promote Deloitte's greening programme.

5.3.2 Age group 18-27

This age group is comprised mainly of non-management staff and constituted the majority of the sample which influenced the overall results of the study. A salient result revealed that age group 18-27years had no time nor did they bother to read greening reports. It was also noticed that non-management had the highest response with regard to not receiving greening reports. A special programme needs to be implemented focusing on this group. The line manager can also address the issue and ensure that reports are received.

5.3.3 Reading of the green reports

A high proportion of the Woodlands staff compared to the Durban staff who responded that they never read greening reports. Simple, understandable reports should be sent out to encourage reading. Social events should incorporate green activities. Green communication screen savers can increase and encourage reading. Dashboards on the intranet and posters increase awareness and these can be used as vehicles to disseminate information. Management from the Woodlands Office need to address the green issue as a priority. The difference in the responses means that there are different approaches to addressing the issue

or simply the same approaches are used but yielding different results. This needs further investigation.

The green reports provide quarterly tonnages of waste separation. It is however evident that less than two thirds (60.6%) separated their waste. Targets should be set to encourage waste segregation.

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5.3.4 Reward systems for green activities

The response to this question was negatively skewed. Deloitte does not reward its staff for green activities. A reward system needs to be incorporated into the green policy. Nominations on the Deloitte Way system for greening efforts, gifts and financial rewards can be used to motivate employees. Competitions could add some fun in keeping the office green exciting and active.

5.3.5. Monitoring of green behaviour

Although staff have responded that green behaviours should be monitored, this is the only option if staff do not buy into the system. A possibility of penalties being imposed and green behaviour being monitored could force employee compliance.

5.4 Limitations of the study

- Dissemination of the questionnaire. Some staff did not have access to the Internet as they were blue collar workers. Staff travelling abroad or working at client's premises did not have access to the internet to complete the questionnaire.
- Literature review: There was limited South African literature on the subject. A fairly new topic, not many books that have been published. Mainly journal articles were used which provided a general viewpoint. Contradicting statements were made around the topic by authors.

- Overload: Too many questionnaires are sent out on a weekly basis to staff in the organisation. Staff are overwhelmed with online surveys and therefore they did not respond timeously to this questionnaire.
- Lack of interest: Since staff had not been addressed on Environmental Management by leadership, they did not show much interest in responding. The leader of the sustainability department from the Woodlands Office had to send out an e-mail to staff to encourage staff to respond. The Regional leader from the Durban office also issued a request for staff to respond.
- The importance of the study: Staff did not understand the importance of the research project.

5.5 Recommendations to overcome limitations

The following are considerations which should be taken in future such studies.

- The study was limited to employee responses to Environmental Management practices. The organisation is a partnership and partners consider themselves as the owners of the organisation, they should form this as a part of future studies.
- The website questionnaire was overlooked by some and some staff did not understand the questionnaire. Staff who were travelling or had no access to their laptops contributed to this. It is suggested that in future both online questionnaires and hard copy questionnaires be used.
- A larger sample could be used which will be more representative of the population.
- A qualitative analysis could be incorporated to achieve an in-depth response.
- Studies should include other regions such as Cape Town, Port Elizabeth and Pretoria Office as well as the Richards Bay and Pietermaritzburg Offices in KwaZulu-Natal
- Incorporate green office policies as policies and procedures in the employment contract.

5.6 Topics for further research

- Top management concern toward green offices.
- The role of Landlords and Tenants in creating green offices
- How can staff be more efficient in reducing waste?
- Green supply chain. How green are suppliers and contractors?
- How green issues are interrelated with Health and Safety?

5.7 Summary

Commitment is about generating human energy and activating the human mind, without it, the implementation of any new initiative or idea is seriously compromised.

The aim of this study was to understand employee responses towards the green office concept at Deloitte Offices of Durban and Woodlands. The objectives were to determine whether the recycling stations were utilised; the amount of waste being recycled; staff attitudes and the involvement of top management in these programmes. The data collected answered the questions and the objectives and confirmed that recycling programmes are in place and that some staff members are actively involved in these programmes.

The results also revealed some negative issues in the sense that some staff were unaware of the programmes and some were being excluded from communications. Responses revealed that the organisation was failing in their duties to live up to green standards. Although there were limitations, this study has identified shortcomings and the recommendations, if implemented, could improve greening efforts at Deloitte.

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MBA Research Project

Researcher: Mr Jay Seepurshad - 084 564 4183
Supervisor: Prof. AM Singh - 031 260 7061
Research Office: Ms. P Ximba - 031 260 3587

Dear Respondent,

I, Jay Seepurshad am an MBA student, at the School of the University of Kwazulu Natal. You are invited to participate in a research project entitled: **EMPLOYEE RESPONSES TO ENVIRONMENT MANAGEMENT PRACTICES**. The aim of this study is to understand the environment management strategies that are in place in organizations; the level of understanding staff have towards environment management and how involved are they in these programmes. Through your participation I hope to understand: staff commitment; knowledge and attitude towards Environment Practices; the communication and the management of these initiatives; types of Greening efforts that exist in the organization.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey/focus group. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business (GSB), UKZN.
Your participation will add to the body of knowledge in Environment Management and provide a basis for future research.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact my supervisor or myself at the numbers listed above.
The survey should take you under 5 minutes to complete. I hope you will take the time to complete this survey.

If you agree to the above and want to proceed to the questionnaire, please select the I AGREE checkbox and then click on CONTINUE, alternatively to opt out of the questionnaire, please select the EXIT SURVEY link on the top right hand corner of the screen.

Thank you for your time.
Yours Sincerely,

JJ Seepurshad

Jay Seepurshad MBA3
208 507 203
EMPLOYEE RESPONSES TO ENVIRONMENT MANAGEMENT PRACTICES

Please tick appropriate box.

1. Gender:
   - ☐ Male
   - ☐ Female

2. Age:
   - ☐ 18 – 27
   - ☐ 28 - 37
   - ☐ 38 - 47
   - ☐ 48 - 57
   - ☐ 58+

3. Race group:
   - ☐ Black
   - ☐ White
   - ☐ Asian
   - ☐ Coloured
   - ☐ Other

4. Employment:
   - ☐ Permanent
   - ☐ Casual
   - ☐ Contract

5. Level in organisation:
   - ☐ Non-management
   - ☐ Junior management
   - ☐ Middle management
   - ☐ Senior Management

6. Where are you based?

- ☐ Durban Office
- ☐ Woodlands Office

7. Building number: 1
2
3
4
5
6
7
15
33

8. Is there any commitment on Green Office in the Deloitte Policy Statement?

- ☐ Yes
- ☐ No
- ☐ I do not know

9. I know what Environment Management is

Strongly Disagree	Disagree	Agree	Strongly Agree

10. Environment Management practices are important in our workplace

Strongly Disagree	Disagree	Agree	Strongly Agree

11. I am aware of any environment / Green initiatives in my work place?

Strongly Disagree	Disagree	Agree	Strongly Agree

12. Management have addressed the issue of a Green Office Environment?

Strongly Disagree	Disagree	Agree	Strongly Agree

13. Management have formed a Green Committee in our workplace?

Strongly Disagree	Disagree	Agree	Strongly Agree

14. The Greening efforts being implemented include: (choose all applicable options)

- ☐ Electricity savings
- ☐ Water savings
- ☐ Recycling of waste
- ☐ Recycling of e-waste / computer consumables
- ☐ All of the above
- ☐ None of the above

15. Is there segregated waste collection in your office?
    - ☐ Yes
    - ☐ No
16. If the answer to the above is Yes, who does the waste separation?
    - ☐ Staff themselves
    - ☐ A special team
    - ☐ Cleaners / janitors

If you indicated that staff themselves do the separation, please answer the following questions.

17. I know where the recycling zone is situated

Strongly Disagree	Disagree	Agree	Strongly Agree

18. The recycling zone is easy to use

Strongly Disagree	Disagree	Agree	Strongly Agree

19. The recycling zone is hygienic

Strongly Disagree	Disagree	Agree	Strongly Agree

20. I know how to use the recycling zone

Strongly Disagree	Disagree	Agree	Strongly Agree

21. I do recycling willingly

Strongly Disagree	Disagree	Agree	Strongly Agree

22. If you answered Yes to Question 15
On a daily basis, on average I recycle...

Category of waste	<1kg	1kg	2kg	3kg	>3kg
Paper					
Glass					
Plastic					
Cans					

23. I believe that employee green practices
- ☐ Should not be monitored
- ☐ Should be monitored
- ☐ Should be monitored and penalties imposed for non-compliance

24. Whose responsibility is it to monitor employee green practices? (only one choice)
- ☐ Line managers
- ☐ Green committee
- ☐ Whistle blowers / Green Police should be set up

25. Deloitte provides me with regular reports on greening efforts

Never	Rarely	Sometimes	Usually	Always

26. How often do you read the company greening reports?

Never	Rarely	Sometimes	Usually	Always

27. If you answered Never or Rarely, why do you not read reports more often?
- ☐ I have no time
- ☐ I have no interest
- ☐ It is the responsibility of others to read the report
- ☐ The report is too difficult to understand
- ☐ The report does not have sufficient details

28. Deloitte rewards staff for their greening efforts.

Never	Rarely	Sometimes	Usually	Always

MARSXpress

CEM

Oil

Microwave Sample Preparation Note: XprOP-1 Rev. Date: 6/04
Category: Oils

Sample Type: Oil
Application Type: Acid Digestion
Vessel Type: 55 mL
Number of Vessels: 12
Reagents: Nitric Acid (70%)
Method Sample Type: Organic
Sample Weight: 0.5 gram

Step 1:

Acid Type	Volume
Nitric	10 mL

Heating Program: Ramp to Temperature Control

Stage	Max. Power	% Power	Ramp (min.)	Pressure (psi)	Temperature (°C)	Hold (min.)
(1)	1200 W	75	15:00	-	200	15:00

NOTE A: This procedure is a reference point for sample digestion using the CEM Microwave Sample Preparation System and may need to be modified or changed to obtain the required results on your sample.
NOTE B: Manual venting of CEM closed vessels should only be performed when wearing hand, eye and body protection and only when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator and toward the back of a fume hood.
NOTE C: Power should be adjusted up or down with respect to the number of vessels. General guidelines are as follows: 8-12 vessels (50% power), 13-20 vessels (75% power), >20 vessels (100% power).
NOTE D: "Organic Method Sample Type" should be used for most sample types. Choose "Inorganic" for samples with more than 1 gram of solid material remaining at the bottom of the vessel at the end of the digest (ex leach methods). Choose "Water" for samples that are largely aqueous prior to digestion.