WATER MANAGEMENT PRACTICES IN

SELECTED CAPE TOWN HOTELS

BY

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DECLARATION

I, Desré Draper, declare that the contents of this mini-thesis represent my own unaided work, and that the mini-thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it presents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

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ABSTRACT

The City of Cape Town implemented water restrictions from November 2004 and all residents in Cape Town had to rethink their water management practices. In the context of global environmental initiatives, this was a positive move as South Africans need to change the way water is used in line with global environmental practices.

The increasing emphasis for the hospitality industry to “green the business” and implement environmental management practices forms the basis of this research project. The study focused on what water management practices are currently being utilised in selected Cape Town hotels. Initiatives available to assist the hospitality industry in South Africa were also researched to determine what assistance there is for local hoteliers who are implementing water management practices. An objective of the study was the inclusion of recommendations that hoteliers can use as a starting point when implementing water management practices.

The study focused on a study amongst selected three, four and five star graded hotels in the central business district of Cape Town and Waterfront. Quantitative methods were used to generate data relating to the research objectives. A questionnaire was administered to representatives of the sampled 44 hotels to determine current water management practices. Guests within the sample group received a separate questionnaire to determine their perceptions with regard to water management practices in South African hotels. The data was analysed using the Statistical Package for the Social Science (SPSS).

The findings of the study showed that South African hoteliers are starting to “green the business” and guests to South Africa do view environmental issues as a factor when choosing accommodation.

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DEFINITIONS AND CONCEPTS

Various definitions, acronyms and concepts are used in the text. In order to eliminate any discrepancy and misunderstanding with regard to these concepts, the following definitions and descriptions apply:

i. Agenda 21 – A program, produced at the 1992 Earth Summit, run by the United Nations related to sustainable development.
ii. Clean water – Water that can be used by people for drinking, cooking and other daily activities.
iii. CBD – Central Business District.
iv. DWAF – Department of Water Affairs and Forestry.
v. EMS – Environmental Management System.
vi. Environment – The surrounding in which an organisation or living system operates. It includes natural physical entities like air, water, land and its resources, human beings, plants, animals, and their interrelationships.
vii. Environmental aspect – Refers to an organisation's activities, services or products which interact with the environment.
viii. Environmental impact – Refers to the change in an environment, fully or partially resulting from an organisation's activities, services and products.
ix. FEDHASA – The Federated Hospitality Association of Southern Africa.
x. Greening the business – A term used to describe a business that is aware of environmental issues and implements practices that contribute to environmental awareness.
xi. Grey water – Water that has been used in sinks, baths, showers and washing machines that can be reused for landscaping or recycled back into the building through the toilet system. The waste water is treated and stored on site and requires a second piping system with a pump and filter system.

xii. Hotel - A hotel provides accommodation to the travelling public, has a reception area and offers at least a "breakfast room" or communal eating area. In general a hotel makes food and beverage services available to a guest, though these may be outsourced or provided by the hotel.

xiii. IHEI – International Hotels Environmental Initiative.

xiv. ISO – International Standards Organisation.

xv. ISO 14000 – A series of international standards on environmental management. It provides a framework for the development of an environmental management system with a supporting audit programs.

xvi. ISO 14001 – The corner stone standard of the ISO 14000 series. It specifies a framework of control for an Environmental Management System against which organisations can be certified by a third party.

xvii. MOA – Memorandum of Agreement.

xviii. National Water Act (36 of 1998) – This Act deals with water resources including rivers, streams, dams and ground water. It contains rules about the ways in which the water resource (surface and ground water) is protected, used, developed, conserved, managed and controlled in an integrated manner.

xix. Potable water - Drinking water.

xx. Responsible Tourism – Enabling local communities to enjoy a better quality of life, through increased socio-economic benefits and an improved environment. It is concerned with providing better holiday experiences for guests and good business opportunities for tourism enterprises.

xxi. SPSS - Statistical Package for Social Science.

xxii. Sustainable Tourism – The future well-being of the tourism industry is dependent on the protection of environmental systems and respect for communities and societies.

xxiii. WC – Water conservation.

xxiv. WDM – Water demand management.

xxv. WSSD – World Summit on Sustainable Development.

xxvi. Water Services Act (108 of 1997) – This Act deals mainly with water services or potable (drinkable) water and sanitation services supplied by municipalities to households and other municipal water users. It contains rules about how municipalities should provide water supply and sanitation services.

CHAPTER 1

PROBLEM AND GOAL FORMULATION

1.1 INTRODUCTION

The concept of sustainable tourism has been an important issue world wide since the United Nation's Rio de Janeiro Earth Summit in 1992 (Anon, 2005d:1). World wide environmental organisations, such as Green Trust, World Wildlife Fund, Green Globe, and others, are eco-conscious role players that focus on a multi-dimensional level with regard to saving the planet's natural resources. Sustainable tourism is one of the areas of concern for environmental organisations, and this is an area in which the hospitality industry can contribute.

The South African Department of Environmental Affairs and Tourism, in the 1996 White Paper on the Development and Promotion of Tourism in South Africa, identified the concept of "Responsible Tourism" as the most appropriate concept and guiding principle for tourism development in South Africa (Keyser, 2002:381).

1.2 BACKGROUND

The hospitality industry has to become aware of ways to deal with environmental issues in a manner that that can contribute to this area of global concern. Strategies should include the implementation of environmental practices and polices, staff environmental awareness training, guest awareness campaigns and changes to structural design within the hotel. In 2002, the South African hospitality industry developed sustainable tourism guidelines that have been adopted by many hospitality establishments. These guidelines, which are voluntary, were developed in line with the World Tourism Organisation's code of ethics, broad ISO

14001 best practice and the International Hoteliers' Environmental Initiative. Hoteliers need to ensure that the strategies they put in place conform to guidelines developed by South Africa's Department of Environmental Affairs and Tourism (Anon, 2005a:2).

Given the need for involvement in sustainable tourism, together with the water restrictions being implemented by the Directorate of Water Services in the City of Cape Town, Cape Town hoteliers need to take measures to ensure effective water management practices are in place. The measures that are implemented should take place with limited disruption to the hotel's operation or guest satisfaction.

1.3 MAIN RESEARCH PROBLEM

The continuing water shortage in the Cape Peninsula, incorporating the City Cape Town, has lead to the Directorate of Water Services in the City of Cape Town implementing water restrictions to assist in the conservation of water (Gosling, 2004:1). These water restrictions took effect as of 1st October 2004 with further restrictions being implemented in January 2005 (City of Cape Town, 2004a:1).

The Directorate, albeit sympathetic to the hospitality industry, has informed the industry that applications for exemption will only be considered on an establishment-by-establishment basis and that exemptions will only be granted in exceptional circumstances (Van Niekerk, 2004b:1).

Water restrictions aside, internationally there is growing pressure for hoteliers to become part of an ever increasing "greening the business" initiative with regard to preserving the environment (Bohdanowicz, 2005:188-204). The attitudes toward water management practices is but one of the issues that hoteliers deal with when confronting environmental

management policies (Kirk, 1998:33-47). Other issues of concern include waste management, energy management and pollution.

Due to the need for the hospitality industry to operate within the scope of the law and to conform to international environmental initiatives, the study determined what selected Cape Town hoteliers are doing with regard to water management practices. The study proposes a recommendation for implementing water management practices that can be used by Cape Town hoteliers.

1.4 OBJECTIVES OF THE STUDY

The specific research objectives of the study are to:

- Determine what water management practices are being implemented in selected Cape Town hotels.
- Determine what water management programs or initiatives are available to hoteliers in Cape Town.
- Determine whether selected hotels in Cape Town conform to international water management practices.
- Determine whether guests are sensitive to the water management practices applied in selected Cape Town hotels.
- Develop recommendations for the implementation of water management practices for Cape Town hoteliers.

1.5 SIGNIFICANCE OF THE RESEARCH

The South African hospitality industry needs to become aware of the concept of sustainable tourism and environmental management. This, coupled with the water shortage and water restrictions that the City of

Cape Town and surround areas are experiencing, makes water management practices an important task in the hospitality industry.

Jacobs (2005:9) discusses the importance of the triple bottom line in measuring performance according to environmental (planet), social (people) and economic (profit) practices and achievements. The hospitality industry needs to be aware of measures to conserve the country's natural resources (Department of Water Affairs and Forestry, 2004:2-3).

Water management practices are but one of the areas where the hospitality industry can contribute to the environment and gain financial saving. Bohdanowicz (2005:191), Chan and Wong (2006:482) and Mensah (2005:6) have found that internationally the benefits of water management practices cannot be seen in isolation. Cost savings and customer service need to be seen to benefit from environmental practices implemented.

The recommendations put forward in the study with regard to the implementation of water management practices illustrate what hoteliers can do to ensure water management within their establishment. The recommendations provide for both short-term (the day to day saving mechanism) and long-term (capital expenditure) methods for dealing with the management of water within the hotel environment.

1.6 RESEARCH QUESTIONS

- What water management practices are selected Cape Town hotels using?
- What water management programs or initiatives are available to hotels in Cape Town?
- Do the water management practices of selected Cape Town hotels conform to international water management practices?
- Do guest perceptions regarding a hotel's water management practices influence a guest's choice of accommodation?
- What recommendations for implementing water management practices can be provided to hotels in Cape Town?

1.7 RESEARCH METHODOLOGY

Study design: A study was conducted amongst three, four and five star graded hotels in selected Cape Town hotels. The focus of the study was on hotels in the central business district of the City of Cape Town and the Waterfront area.

Sample: The survey sample (n=44) comprised sampling of three (n=13), four (n=23) and five (n=8) star graded hotels, within the delineated area, (appendix D), as per the star grading list of the South African Tourism Grading Council (Tourism Grading Council of South Africa, 2006).

The sample was selected using the advanced selection criteria determined by the Tourism Grading Council of South Africa.
Province – Western Cape.
City / suburb – Cape Town.
Rating – 3-star, 4-star and 5 star.
Establishment type – Hotel.

The predominant criterion was Cape Town which included the suburbs of Waterfront, Mouille Point, Green Point, Three Anchor Bay, Tamboerskloof, Gardens and City Bowl. Appendix D shows a map of the area to illustrate the general location of the suburbs where the hotels that took part in the study are located.

Instrument: Quantitative methods were used to generate data relating to the research objectives identified by means of structured questionnaires. An anonymous questionnaire with closed and open ended questions was completed by management representatives in the selected sample. An anonymous questionnaire was completed randomly by guests from each of the star grading groups to determine guest perceptions per star grading group. The quantitative data was analyzed using the computerised statistical package, SPSS 16. The data was then organised, presented and interpreted using summary statistics such as frequency tables, cross tabulation and Chi-square testing.

Ethics: Confidentiality was maintained throughout the study with the responses from the participating hotels remaining anonymous.

1.8 OUTCOMES, RESULTS AND CONTRIBUTIONS OF THE RESEARCH

Data obtained from the questionnaires gave an indication as to what selected Cape Town hoteliers are doing with regard to water management within their establishments. The level of awareness of water management practices and the need for water management were being identified through the results obtained. The results established the need for creating awareness and educating the hospitality industry of the role it can play with regard to sustainable tourism. The concept of the triple bottom line, environmental, social and economic, illustrated to hoteliers the benefits for water management practices together with other environmental practices.

Recommendations for dealing with water management practices for Cape Town hotels were proposed to the hotelier as a starting point from which to develop water management practices for short-term (the day to day saving mechanism) and long-term (capital expenditure) saving.

The study also served to inform the hospitality industry in the Cape Town area what support and assistance is provided by the Federated Hospitality Association of Southern Africa (FEDHASA) and its associates with regard to developing environmental policies and effective water management practices.

1.9 CONCLUSION

In this chapter attention was given to the background and the main research problem, objectives of the study, significance of the research, research questions and the research methodology, which were utilised in the study. Further, the expected outcomes, results and contribution of the study were also identified. The final section of this chapter sets forth the outline of the study field covered in this study.

1.10 OUTLINE OF THE STUDY FIELD

The study focused on the water management practices in selected Cape Town hotels and consists of six chapters. Chapter 1 outlines the problem to be studied and the goals of the study were formulated. Chapter 2 contains the situation analysis of water management practices and investigates water management on the international agenda. The water shortage in the City of Cape Town is highlighted as are the FEDHASA initiatives established to assist hoteliers. General water management practices and environmental programs that are available to hoteliers to deal with water management within the hospitality sector are also

investigated in this study. Jointly the areas covered in this chapter will put water management practices into perspective as applicable to hotels within the hospitality industry. In Chapter 3 the research design for the study is outlined, including the structure of the two questionnaires used in the study of water management practices in selected Cape Town hotels. Chapter 4 reflects the findings of the empirical study by means of analysis, interpretation and discussion of results. Chapter 5 provides recommendations that hospitality managers in Cape Town hotels could use as a tool for initiating sound water management practices. The final section of the study, Chapter 6, provides the conclusions, recommendations and limitations based on the findings of the study.

CHAPTER 2

SITUATION ANALYSIS

2.1 CHAPTER OUTLINE

Chapter 1 provided the background and the main research problems, objectives of the study, significance of the research, research questions, and the research methodology utilised in the study. The expected outcomes, results and contribution of the study were discussed with the final section being the outline of the study.

Chapter 2 contains the situation analysis of international environmental management issues with the emphasis on water. Water on the international agenda is examined on a timeline from 1997 to 2005 and beyond. The concept of environmental management systems is examined with the inclusion of the ISO series relevant to environmental management Water management practices. This is on both the internationally and local fronts, and also refers to the water shortages in the City of Cape Town. The chapter also deals with FEDHASA initiatives established to assist hoteliers in South Africa with general water management practices and environmental programs that are available to hoteliers to deal with water management. Jointly, the areas covered in this chapter will put water management practices into perspective as applicable to hotels within the hospitality industry.

2.2 INTRODUCTION

“International awareness of the impacts of tourism on local communities and on the natural environment around us has created a demand for environmentally responsible tourism based businesses worldwide” (Heritage, 2005:4). Statements such as this have promoted local authorities such as the Department of Environmental Affairs and Tourism to take action. International awareness of environmental management has for many years been on the agenda with many initiatives being implemented as far back as 1977.

In 2003, the South African Department of Environmental Affairs and Tourism published National Tourism Guidelines, reflecting South Africa’s vision with regard to managing tourism in such a way that there would be growth in the tourism and hospitality sector whilst providing social and economic benefits to local communities and respecting the environment. The primary focus of the guidelines deal with economic aspects, social aspects and environmental aspects. These environmental guidelines, contained within the National Tourism Guideline, cover a broad area that incorporates environmental planning, nature conservation, water management, energy management and waste management (Department of Environmental Affairs and Tourism, 2003:19-36). All of the above mentioned environmental aspects can be managed to differing degrees by hoteliers.

In view of water restrictions in place in Cape Town there is an urgent need for hoteliers to deal with the environmental aspect of water management from both the saving of resource aspect as well as the environmental aspect.

2.3 WATER ON THE INTERNATIONAL AGENDA

The World Water Council, located in Marseille, France, is an international organisation that was established in 1996 by water specialists and international organisations in response to the ever increasing concern about world water usage and saving.

The mission of the World Water Council is to “promote awareness, build political commitment and trigger action on critical water issues at all levels, including the highest decision-making level, to facilitate the efficient conservation, protection, development, planning, management and use of water in all its dimensions on an environmentally sustainable basis for the benefit of all life on earth" (World Water Council:2009a).

The World Water Council provides a platform for debate and exchanges of experiences on an international level. The Council’s focus is on reaching a common strategic vision on water resources and water management practices amongst all stakeholders in the water community. The World Water Forum (World Water Council:2009c) is an international event that is organised by the Council every three years with the aim to:

- Raise the importance of water on the political agenda.
- Support the deepening of discussions towards the solutions of international water issues in the 21st century.
- Formulate concrete proposals and bring their importance to the world’s attention.
- Generate political commitment.

International events, such as the above mentioned, have been taking place since 1977 with various countries around the world hosting the events. The World Water Council (World Water Council:2009b) has documented the following chronological order of events surrounding international involvement in water management.

1997 *United Nations Conference on Water* in Mar Del Plata Argentina. This was the first international conference convened to deal with global water concerns. A recommendation from this conference was that a systemic assessment of water resources should be implemented.

1981 – 1990 *International Drinking Water Supply and Sanitation Decade* that was initiated by the United Nations. The goal of the United Nations with this initiative was to "Provide every person with access to water of safe quality and adequate quantity, along with basic sanitary facilities, by 1990". Time has shown that this goal was not realized and today is still an area of global concern.

1990 *Global consultation on Safe Water and Sanitation for the 1990's* was convened in New Delhi, India. The conference focused on an appeal to the global community for action to enable people to have access to the most basic human needs; safe drinking water and environmental sanitation.

1992 *International Conference of Water and the Environment*. This conference convened in Dublin, Ireland, was seen as the precursor to the first Earth Summit to be held later in 1992.

1992 *United Nations Conference on Environment and Development.* This is referred to as the first Earth Summit and was convened in Rio De Janeiro, Brazil. A significant outcome of this conference was Agenda 21 which focused on sustainable development. Chapter 18 of Agenda 21 was dedicated to water and focused on the global management of freshwater and the integration of sectoral water plans and programs within the framework of national economic and social policy.

1994 *Ministerial Conference on Drinking Water Supply and Environmental Sanitation*. This conference was held in Noordwijk, Netherlands, and lead to a program that placed high priority on the initiatives to provide basic sanitation and excreta disposal systems to urban and rural areas.

1994 *International Conference on Population and Development*. This conference was held in Le Caire, France. The focus at this conference was the integration of population, environmental and poverty eradication in sustainable development policies.

1996 *United Nations Conference on Human Settlement* hosted in Istanbul, Turkey, highlighted the necessity of promoting healthy living environments, through providing adequate quantities of safe water and effective management of waste.

1997 *First World Water Forum* which was held in Marrakech, Morocco. The focus of this Forum was the marketability and cost of water. The five priorities that were linked to this were; water and sanitation, shared water management, ecosystem conservation, gender equality and efficient use of water.

2000 *Second World Water Forum*. This Forum was held in La Hague, France, and the Forum recognised that better governance and an integrated water resource management was critical to dealing with water management in the global arena.

2000 *United Nations Millennium Declaration* which stated by 2015 the world needed to halve the number of people who are unable to reach or to afford safe drinking water.

2001 *International Conference on Freshwater* was held in Bonn, Germany and was convened by the Government of the Federal Republic of Germany. The priority of this conference was the recognition of water as being key to sustainable development. It also recognised that the local level is where national policy meets community needs and the importance of partnerships.

2002 *World Summit on Sustainable Development (Rio +10)* was held in Johannesburg, South Africa. At this summit the Millennium Development Goals were reaffirmed with the addition of sanitation issues. The plan that was taken from this Summit highlighted the:

- Development and implementation of efficient household sanitation systems.
- Improvement on sanitation in public institutions with special focus on schools.
- Promotion of safe hygiene practices.
- Promotion of education and outreach that focused on children as agents of behavioural change.
- Promotion of affordable and socially and culturally acceptable technologies and practices.
- Development on innovative financing and partnerships.
- Integration of sanitation into water resources management strategies.

2002 Third World Water Forum was held in Kyoto, Japan, and this Forum highlighted the following priorities:

- Governance.
- Integrated water resources.
- Gender.
- Pro-poor policies.
- Financing.
- Cooperation.
- Capacity-building.
- Water use efficiency.
- Water pollution prevention.
- Disaster mitigation.

2003 *International Water Year*.

2006 *Fourth World Water Forum*. This Forum was held in Mexico City, Mexico and focused on taking the water issue back to the local communities. The experiences and knowledge of local authorities was seen as being key to confronting the global water problems.

2005 – 2015 *International Decade for Action "Water for Life"*. This initiative was launched by the United Nations with the focus being on water related issues at all levels and on the implementation of water related programs and projects. The key priorities for this initiative are:

- Scarcity of water.
- Sanitation access.
- Disaster prevention.
- Water pollution.
- Trans-boundary water issues.
- Sanitation and gender.
- Capacity building.
- Financing.
- Valuation.
- Integration on water resources management.
- Africa as a region for priority action.

The information above has lead to the formalisation of the focus on environmental issues with Agenda 21 as produced at the 1992 Earth Summit, related to sustainable development. This has lead to the tourism industry developing three tools to achieve sustainability within the broader tourism sector. The first tool is the introduction of new, or strengthening of existing, regulation to ensure the protection of human health and environment. Secondly to make use of free market mechanisms, by which

the price of goods and services should increasingly reflect the environmental costs of resources, inputs, manufacture, use, recycling and disposal subject to the country specific conditions. Finally to ensure that industry led voluntary programs, which aim to ensure responsible and ethical management of products and processes from the point of view of health and safety environmental aspects (Nikolova & Hens, 1999:289).

The high level of water consumption within hotels, together with the high costs in receiving water, highlights the importance of water management practices within this sector of the tourism industry. In business terms the efficient use of water can have an impact on the environment and provide financial savings for the hotel. Nikolova & Hens (1999:290) note that the first step hoteliers can take in the management of water resources is an audit of the current water uses. Thereafter an effective water management plan should be developed and implemented and this would be the start of making a change to the environment and a financial benefit for the hotel.

2.4 ENVIRONMENTAL MANAGEMENT SYSTEMS

Uberoi (2003:233) refers to environmental management system (EMS) as systems that are formalised and show that they have been put together in a comprehensive, systematic, planned and documented manner. It incorporates the organizations structure, planning, resources for developing, implementing and maintaining the policy for the protection of the environment. In order for this to be realised it needs to have commitment from top management. Without the top management support the implementation of any EMS will not have the desired result. By having written objectives for EMS the importance of the EMS can be formally recognised by all within the hotel. The relevant legal requirements need to be considered and acted upon to ensure that the hotelier does not make changes that are outside of the law. It is important to ensure correct

documentation of all procedures dealing with standard processes so that employees can follow the standardized procedures. Management need to assign areas of responsibly to employees to ensure everyone knows who is responsible for what in order to have clear lines of responsibility and accountability. The convening of an environmental audit is important in order to know the environmental aspects and impacts of an organisation's activities.

2.5 ISO 14001

ISO (International Standards Organisation), established in 1947, was founded in order to develop worldwide standards that would lead to better communication and collaboration. The ISO 14000 series was created in response to industry and its role in managing sustainable development issues that were first raised globally at the Rio Summit of 1992. The ISO 14000 series was approved by the European Commission through recommendations of the European Union's Standardisation Body. (Uberoi, 2003:234-237). Chan and Wong (2006:482) refer to the ISO 14000 series as standards that were developed in response to the increase of different EMS standards in various countries. Chan (2008:188-189) notes that the series contains guidelines relevant to various environmental issues such as:

ISO 14001 - EMS: Specifications with guidance for use.
ISO 14004 - EMS: General guidelines on principles, systems and supporting techniques.
ISO 14010 – Guidelines for environmental auditing: General principles.
ISO 14011 – Guidelines for environmental auditing: Audit procedures.
ISO 14012 – Guidelines for environmental auditing: Qualification criteria for environmental auditors.

ISO 14024 – Environmental labelling.
ISO 14040 – Life cycle assessment.
ISO 14060 – Guide for the inclusion of environmental aspects in product standards,

ISO 14001 is the standard against which an organisation can become certified for EMS. The EMS consists of five core principles as identified by Chan and Wong (2006:482-483), Uberoi (2003:237) and Kirk (2005:1) who all concur on the importance of these principles. An organisation needs to meet these criteria if certification against the ISO 14001 is sought.

1. *Environmental policy* which must be developed in order to provide for clear policy and objectives for the organisation.

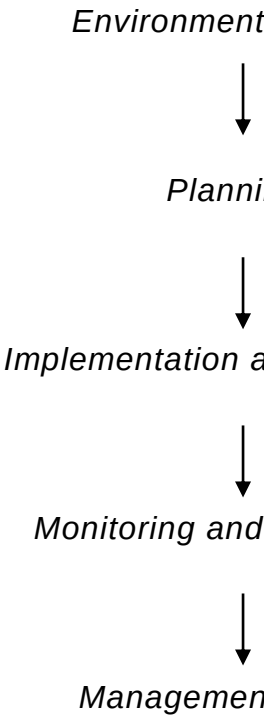
2. *Planning* to formulate a plan that includes the macro and micro aspects in order to implement the policy and objectives.

3. *Implementation and operation* which must ensure a structure that can achieve the implementation of the policy and objectives through clear lines of responsibility, training procedures, operational controls and documentation.

4. *Monitoring and evaluation* that ensures that the environmental performance is meeting requirements and allows for corrective action in areas of non compliance.

5. *Management review* of the EMS at predetermined dates to ensure that changes to the environmental policy and objectives are implemented as and when required.

Five core principles of ISO 14001 EMS.



2.6 WHY ENVIRONMENTAL MANAGEMENT SYSTEMS

Uberoi (2003:234) identifies three criteria as to why organisations would be motivated to implement EMS. Firstly it is a statutory requirement and organisations must adhere to these requirements in order to prevent possible prosecution. Secondly to improve the environmental performance of the organisation which will lead to enhancing its image. Thirdly to meet the demand from the clients.

Chan and Wong (2006:484) refer to Quazi *et al*(. with regard to possible reasons why organisations would be motivated to adopt ISO 14001 standards. The reasons put forward included the benefit of cost saving for the organisation, the level of top management concern for the environment and employee welfare. The importance of meeting requirements with regard to environmental regulations and meeting the expectations of the guest is also an important motivator when considering adopting ISO 14001

standards. The concern over trade barriers and not having a competitive advantage over competing organisations is also a motivator as is the need to follow head office environmental practices when part of a corporate organisation.

Bohdanowicz (2006:676-678) finds that amongst hotels in Sweden and Poland reducing operating costs, and thereby saving costs, is the largest incentive for becoming involved in environmental management practices. The factors, in order of importance, identified as part of Bohdanowicz's research, indicate the following incentives:

- Reducing operating costs.
- Demands from customers.
- Diminishing environmental impact of the hotel.
- Improving the hotel image.
- Marketing asset.
- Recommendation of management.
- Availability of professional advice.

The incentives for implementing environmental management as identified by Chan and Wong (2006:484) and Bohdanowicz (2006:676-678) have similarities with reducing costs being key to both.

The significance of the financial saving to a hotel should lead to management providing specific reporting on this. Chan (2005:528) noted that hoteliers should consider including the environmental costs to income statements as a refection on the environmental impact of the various departments. The hotelier could take the process further by reporting on the correlation between room occupancy and water costs to determine base figures for long term analysis. Deng and Burnett (2002:61) found that there is evidence of high water costs associated to high room occupancy.

Kirk's research, (1998:33-47) into the "Attitudes to environmental management held by a group of hotel managers in Edinburgh" found that there was no relationship between the type of hotel and having a written environmental policy. The most significant reason for implementing a policy was to improve the image of the hotel and improve the relationship between the hotel and the local community. Hotels that did have an environmental policy were able to report on financial savings and marketing benefits.

Research done by Bohdanowicz (2005:192-193) into the European hoteliers' environmental attitudes found that hoteliers do not consider environmental commitment to be an important marketing factor. When investigating the features that are advertised and their perceived importance in guest decision-making the following was determined in order of importance. Location, quality of service and price were determined to be the three key motivators that impact on a guest's choice of accommodation. The tradition of the hotel and the concern for the environment were seen to be motivation factors but to a lesser level of importance.

2.6.1 Barriers to environmental management systems.

Barriers to the implementation of EMS are prevalent in all industries. Chan (2008:189) noted that the lack of knowledge of effective conservation practices due to not having sufficient information will hinder any attempt to implement a proper EMS. Organisations that do not have sufficient commitment from the staff will lead to poor management of the initiatives that are implemented. EMS requires financial resources and limited funds can be a serious barrier to the success of any implementation plans an organisation may have. New technology is available to assist with EMS enabling organisations to gain maximum benefit from the programs they implement. The success of any EMS

implementation can be hindered without the proper knowledge and training on how to use the technology available.

Organisations need to ensure that proper documentation of all activities related to an EMS are maintained as staff turnover within the organisation can result in the organisational memory not being maintained and good practices can be lost. An effective EMS requires proper performance measures to be core to determining the success of the interventions put in place. When an organisation does not have clear performance measures this leads to a barrier with regard to the success of the EMS. The performance measures need to be of a quantitative nature to allow for comparisons to monitor improvements and without this data no real benefits can be measured.

The ISO standards are vast and complex in nature and this complexity may be seen by organisations as a barrier to continuing with the process of implementing an EMS.

The legal implications, lack of incentives, full management commitment and lack of employee commitment are all areas of concern when starting with the implementation of an EMS. If these elements together with clear areas of employee responsibilities are not given clarity the EMS implementation is going to be problematic. The importance of all the above areas must be clearly communicated to all within the organisation in order to ensure that management and employees are aware of the role each can play in the implementation of the EMS.

The industry regulations and competitive pressure of the industry can be barriers to the implementation of an EMS as not all organisations have the same resources, financial and or human. Organisations have to adapt the EMS to suit the unique situation in which they operate.

Hillary (2004: 566) categorises the barriers into either internal or external barriers as illustrated in the tables below.

Table 2.1 Internal barriers to EMS implementation (Hillary, 2004:566)

RESOURCES	UNDERSTANDINGS AND PERCEPTIONS	IMPLEMENTATION	ATTITUDES AND COMPANY CULTURE
Lack of management and/or staff time for implementation and maintenance	Lack of awareness of benefits	Implementation is an interruption and interruptible process	Inconsistent top management for EMS implementation
Inadequate technical knowledge and skill	Lack of understanding of EMS environmental statement or value of reporting	Inability to see relevance of all stages	Management instability
Lack of training	Lack of knowledge of formalised systems	Internal auditor independence difficult to achieve in a small organisation	Low management status of person in charge of EMS implementation
Multifunctional staff easily distracted by other work	Uncertainty and concern over possible de-registration (from EMS) for minor breaches of legislation.	Doubts about ongoing effectiveness of EMS to deliver objectives	Resistance to change
Loss of environmental champion	Perception of bureaucracy	Difficulties with environmental aspects/effects evaluation and the determination of significance.	Lack of internal marketing of EMS
Lack of specialist staff	Perception of high costs for implementation and maintenance	Uncertainty about how to maintain continual improvement	Negative view or experience with ISO which rub off on ISO 14001's acceptance
Transient workforce	Confusion between ISO 14001 and EMS and how they relate		
Requirements for capital expenditure			

Table 2.2 External barriers to EMS implementation (Hillary, 2004:567)

CERTIFIERS/VERIFIERS	ECONOMICS	INSTITUTIONAL WEAKNESS	SUPPORT AND GUIDANCE
High cost of certification/verification which disproportionally penalises small organisations	Changing economic climates alters the priority given to all EMS	Lack of promotion of EMS	Lack of experienced consultants of quality to assist organisations
Lack of experienced verifiers	Insufficient drivers and benefits	Lack of accessible financial support	Inconsistent approach of consultants to EMS implementation
Duplication of effort between verifiers/certifiers and internal auditors	Uncertainty about the value of an EMS in the market place	Lack of clear or strict legislative framework	External assistance is required for environmental review and EMS implementation
Variations in verifiers approach to EMS validation		Absence of a central source of information on environmental legislation	Lack of sector specific implementation tools and examples
Distortion in the verifier market		Absence of single authoritative body to interpret EMS	Absence or lack of trade associations or network support
		Inadequate institutional arrangement for EMS	Lack of explanation of concepts and more guidance needed on environmental aspects and significance evaluation
			Poor quality information and conflicting guidance given

2.7 WATER MANAGEMENT PRACTICE IN THE HOSPITALITY INDUSTRY

Water management practices in the hospitality industry, on a worldwide basis, have been around for many years with international environmental programs being implemented in hotels. The International Hotels Environment Initiative (IHEI) was created in 1992 when twelve international hotel companies joined forces to promote continuous improvement in environmental performance by the hotel industry worldwide. The aim of the IHEI is to focus on how hotels can improve their environmental management practices (International Hotels Environment Initiative, 2005:1).

Sloan, Legrand & Chan (2009: 41) indicated that water saving is not a priority for hoteliers with areas such as revenue management and marketing having a higher level of importance. However, from the perspective of a hotel guest, water is an important part of the hotel experience. Any water restrictions that may be in place would result in having an unhappy stay and maintaining adequate water comfort must be central to the hotel's water management practices.

Bohdanowicz (2005:188) has found that hoteliers do rely on the natural environment to attract guests. However, few hotel guests demand that the hotels maintain an environmental program. The attitudes of management towards environmental practices seem to represent a lesser level of importance than that of other operational concerns that have a more direct financial influence. Kirk (1998:33-47), has also found that due to the perception that the hospitality industry does not cause large scale damage to the environment, there tends to be an attitude that leads to a less urgent level of importance to these issues.

Chan and Wong (2006:488) found that senior management tend to focus on improving customer service and revenue before they make

environmental management a key issue. Mensah (2005:6) reported that hoteliers target water management by reducing wastage of water and the improvement of water quality linked to water availability and cost savings together with conservation. Here again the environmental aspect of water management practices are not given priority.

Water is an important resourse for the hospitality industry as it is limited and is needed for a number of activities as illustrated below.

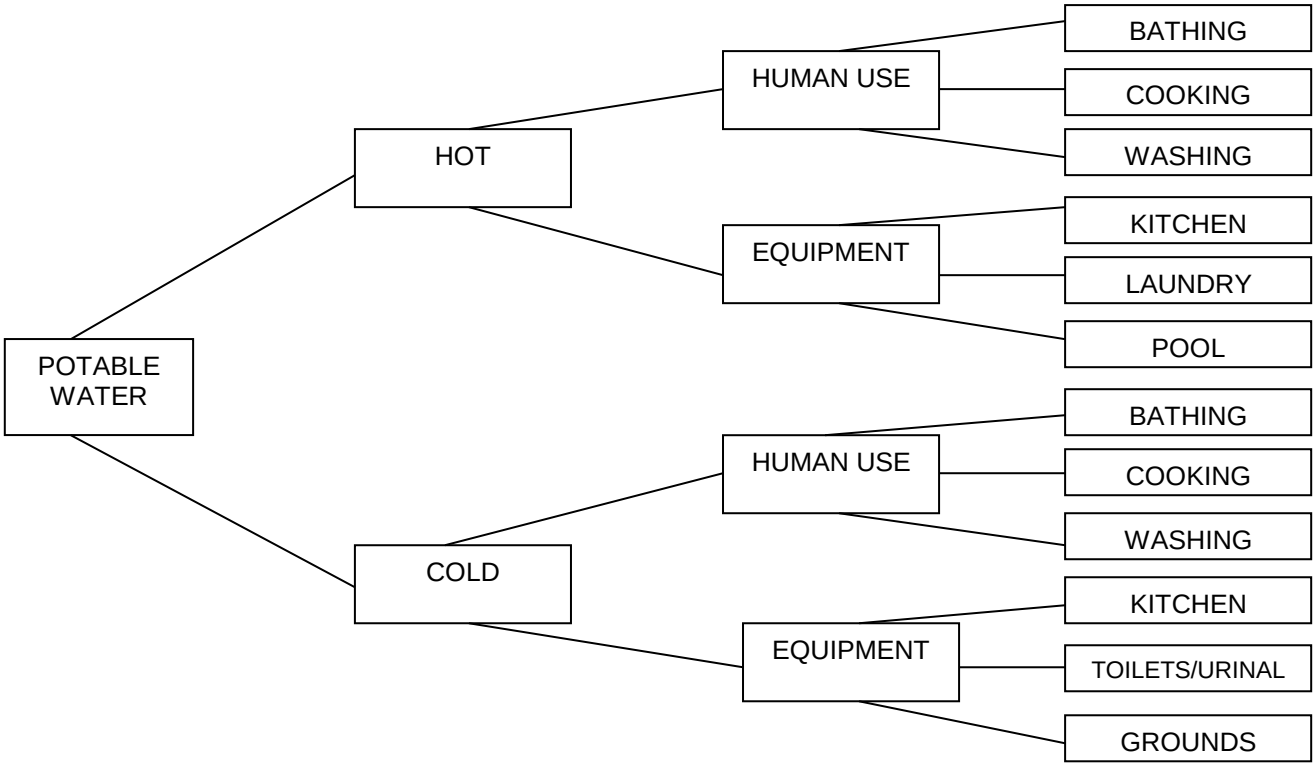


Figure 2.3 Building water systems and uses (Sloan, Legrand & Chen, 2009:42)

Water used by a hotel is dependant on the type, grading and size of the property as well as the service and facilities offered. The climate and irrigation needs and the water management practice all contribute to consumption figures. The typical utility consumption of hotels with between 200 and 1000 rooms indicates that 15% of a hotel's utility costs are portioned to water costs. This is the second only to electricity costs that is portioned 65% (International Hotels Environment Initiative 1993:31).

The areas in a hotel that have the potential for the largest saving when it comes to water saving are guest rooms, laundries, kitchens, swimming pools and gardens. Hotels that have an in-house laundry would have higher costs for water. Deng and Burnett (2002:59-60) found that there is a significant difference in the distribution of water use between hotels that have in an in-house laundry and those that do not. They indicate that approximately 47% of water used in a hotel that has an in-house laundry is utilised by the laundry.

In-house laundry	*No in-house laundry*
Guest rooms 30%	Guest rooms 44%
Kitchen 22%	Kitchen 55%
Other 1%	Other 1%
Laundry 47%	

The importance of environmental issues and practices to management within the hospitality sector over time has grown and with international standards for good environmental practices as set out by ISO 14001, hoteliers cannot ignore the issue. Hoteliers should not see environmental issues as a passing fad but together with working towards preserving the environment, they should be able to benefit and receive a return on their investment. Hotels with good environmental programs increase the efficiencies of their hotel, extend the economic lives of their facilities through sustainable operations and gain important public relations benefits. A hospitality establishment that gains a ‘green’ label can advertise the fact and increase market share. (Baker and Huyton, 2001:70).

Baker and Huyton (2001:71), make reference to reasons why managers are motivated to save water. They state that hotels save water to increase profits as financial returns are always an important motivator. The need to develop a better environmental image is also a strong motivator as this can be a possible determining factor when guest select a hotel to stay in.

The compliance with corporate policy is also relevant as decisions made by the corporate top management is expected to be implemented by all within the structure to the benefit of the corporate group as a whole. The need to reduce runoff and to reduce strain on the sewage system is also seen as important motivators for hotelier.

Hoteliers that wish to achieve maximum benefit of water management initiatives in terms of operating costs savings and environmental protection at the same time as maintaining customer service need to manage the water use in their properties. Water management practices cannot be used in isolation as indicated by Deng and Burnett (2002: 64). Their research found that in most cases water and energy management can be part of an overall environmental management program. Although water can be managed together with energy use, water management has its own characteristics.

The key elements for a water management program as put forward by Deng and Burnett (2002:65) indicate that water management should be integrated into the hotel's management system and be treated as of equal importance as other management functions. Senior management should ensure that there is a clearly defined water management policy and an action plan. Targets for the use of water in the different areas of the hotel should be set and monitored to indicate the success or failure of changes made. Water audits should take place annually and there should be weekly and monthly monitoring of progress against targets in order to have quantitative results to measure progress All staff should be trained and encouraged to be part of the water management practices in order to create a culture of water saving within the hotel. All departments should set up good housekeeping practices that are relevant to the operational standards of the department. Water sub-meters should be installed in major water use areas such as the laundry, kitchens and guest floors to allow for department monitoring of water use. Motivating and encouraging the hotel's maintenance staff to adopt new technologies should be given

high priority as ongoing maintenance and improvements can influence water saving.

2.8 WATER SHORTAGE IN THE CITY OF CAPE TOWN

The City of Cape Town is the provider of water services to all within the City and the Water Service Act (108 of 1997) provides a concise definition with regard to what the Act covers (Department of Water Affairs and Forestry, 2005:8). The Water Service Act deals mainly with water services or potable (drinkable) water and sanitation services supplied by municipalities to households and other municipal water users. It contains rules about how municipalities provide water supply and sanitation services (Department of Water Affairs and Forestry, 2005:8). The City of Cape Town is the custodian of the water within the City and it is thus their responsibility to ensure adequate water supply to all residents. When a shortage of water occurs, preventative measures need to be implemented and monitored by City officials.

In September 2004, the City of Cape Town announced water restrictions, effective 1 October 2004, for areas within the boundaries of the City of Cape Town. (City of Cape Town, 2004b:1). The water restrictions announced were implemented with the aim of cutting water consumption in the City of Cape Town by twenty per cent. The restrictions put in place made it illegal to:

- Use hoses to wash or rinse vehicles, cycles, boats, paths, pavements, paved areas and any movable of immovable structures.
- Water gardens, lawns, parks and public open spaces between 10am and 4pm.
- Use sprinklers to water gardens and lawns (Gosling, 2004:1).

The tourism sector is a high volume user and has been urged to reduce water consumption. The City of Cape Town intends introducing financial penalties unless noticeable reductions are evident with regard to businesses such as hotels, golf estates, guest houses and other 'bulk' users (Anon. 2005c:1).

The City of Cape Town, which took cognisance of the importance of water saving measures being implemented by hotels, launched an initiative known as The Western Cape Hospitality Industry Cleaner Production Pilot Project in 2005. The initiative has the support of the Environmental Affairs MEC and is seen as a project that will benefit the hospitality industry with the development of strategies that will encourage the hospitality sector to 'clean up its act'.

Hotels participating in the project signed a memorandum of agreement with the city that indicates their agreement to invest in recommendations made by free audits of the water usage (Goligoski, 2005:1).

The aim of the project is to reduce wastage in all areas of the environment with the idea that tourists will not only select hotels by the star grading of the hotel, but also by how green the hotel is (Provincial Government Western Cape, 2005:1).

2.9 FEDHASA INITIATIVES

The Federated Hospitality Association of Southern Africa (FEDHASA) is the official representative of the hospitality industry of Southern Africa. FEDHASA represents hotels, restaurants, conference centres, caterers, self-catering accommodation, bed and breakfast accommodation, guesthouses, clubs, taverns, shebeens, suppliers and trainers, consultants and services providers to the hospitality industry. The association works on behalf of the hospitality industry on matters relating to tourism,

legislation, trading conditions, taxation, education and other industry related issues (Department of Water Affairs and Forestry, 2004:1).

2.9.1 Memorandum of Agreement (MOA) between the Department of Water Affairs and Forestry (DWAF) and the Federated Hospitality Association of Southern Africa (FEDHASA)

In April of 2004, FEDHASA and the DWAF signed a memorandum of agreement with the aim to promote and implement water efficiency principles within the hospitality industry.

The aims and objectives of the MOA are to jointly promote principles dealing with Water Conservation (WC) and Water Demand Management (WDM) within the day-to-day operations of a hospitality establishment. The scope of the memorandum covers various WC/WDM issues including (Department of Water Affairs and Forestry, 2004:2-3):

- Develop appropriate policies, strategies and guidelines.
- Establishment of best management practices and benchmarks.
- Awareness campaigns and information sessions for employees and guests.
- Sustainable use of alternative water resources (i.e. groundwater and rainwater harvesting).

Specific projects and initiatives could include the following:

- Specific water audits.
- Developing guidelines and benchmarks for WC/WDM in the hospitality industry.
- Incentive to apply WC/WDM principles in the industry.
- Participation by other government departments and other institutions and organisation as and when required.

- Establishing contact and co-operation with similar initiatives and with relevant bodies outside South Africa.

2.9.2 Water management plan for the hospitality industry

An initiative of the above mentioned MOA was the development of a water management plan for the hospitality industry. A Johannesburg company, Pipeline Performance Technologies, was contracted by the DWAF, with FEDHASA's backing, to prepare a 'Best Practice Manual' for the South African hospitality industry.

The aim of a Best Practice Manual is to empower the South African hospitality industry to implement water management practice, to be informed about the need for water conservation and demand management and to enable the industry to inform others about the need for water conservation (Anon, 2005c:14).

The Best Practice Manual aims to introduce two concepts to the hotelier. Firstly to improve the efficiency of water usage by optimising the water network: infrastructure within the hotel. Secondly to create water conservation awareness within the hotel which encourages guests, staff and management to change their water habits using water conservation guidelines.

Sherratt (2005:4) makes recommendations in the Best Practice Manual for the South African hospitality industry as a whole, and the individual hotelier would need to develop a strategy that meets specific needs and circumstances. The individual strategy can be influenced by numerous factors, such as changes to the existing conditions and operational status of the hotel infrastructure. The budget of the hotel has an effect on the strategy due to cost factors involved in implementation. The image that the hotel wishes to portray is important when determining the strategy as changes need to be in line with the image. Legislation, both national and

local, needs to be considered in order to insure all changes are in line with current legislation of the area in which the hotel operates. Staff participation in the environmental committee is important as without staff input and commitment any changes will not have the full benefit.

FEDHASA has also been proactive with regard to educating the hospitality industry with regard to measures that can be put in place which will lead to short term and medium to longer term savings. Below are a few examples from a list of short term measures and medium to longer term measures to reduce water consumption as per an email that was distributed to all FEDHASA members in October 2004 (Van Niekerk, 2004a).

Examples of short term measures to reduce water consumption:

- Implement awareness campaign to encourage staff to use water sparingly.
- Initiate department meetings to provide information about how to reduce water consumption.
- Focus water reduction training on housekeeping and kitchen employees.
- Incentivise staff to propose water saving measures.
- Compare monthly water records to identify water wastage.
- Housekeeping to cut down number of flushes when cleaning toilets.
- Avoid using water hoses to clean paved areas or outside walls.
- Place mulching in flower beds to retain water longer.
- During low occupancy, house guests in sections and shut down unoccupied areas.
- Adhere to maintenance programs on equipment to ensure efficient operation.
- Carry out maintenance audit of water outlets, taps indoors and outdoors, showers, baths, pools *etcetera.*

Examples of medium to longer term measures to reduce water consumption:

- Install water meters, zoning off units or rooms to allow monitoring of water usage.
- Install trigger guns on all hoses.
- Install single level control mixing taps.
- Install tap flow restrictors.
- Install water conservation shower roses.
- Convert to dual flush toilets.
- Switch to drought resistant plants in the garden.

Recommendations provided by local organisations are in agreement with international measures to save water. Clounden and Singh (1999:18), after extensive case study research into hotels in Barbados and St Lucia provide recommendations for hotels which include keeping records of water consumption and installing water meters in individual departments. It is recommended to set targets for consumption and review the results regularly. The development a water management system is recommended as is the implementation of preventative maintenance systems that deals with any problems as soon as they are reported. All staff should be trained in the importance of checking and reporting leaks to promote a culture of water saving within the hotel. The installation of water conservation devices is recommended as new technology allows for improvement on existing measures and can lead to saving water.

Bohdanowicz (2006:672-673) found that water saving practices in Swedish and Polish hotels are linked to three key initiatives. The first initiative is to ensure that the water fixtures used are efficient and reduce the amount of water used. Secondly, to have a towel reuse programme that encourages guests to reuse their towels thereby reducing the amount of water used in laundries due to less loads. The third initiative is to have leaflets with information about how guests can save water available in their rooms.

It is also noted that towel reuse not only contributes to water saving but also results in energy saving which Deng and Burnett refer to in their research (2002: 64).

2.9.3 Imvelo Awards

In 2002 the Imvelo Awards were presented for the first time in South Africa with an aim of showcasing responsible tourism in South Africa. FEDHASA, the custodians of the Imvelo Awards, through the Awards, aims to create an awareness of environmental management issues across the hospitality and tourism industries of South Africa. Establishments that are actively implementing environmental management practices, including water management practices in line with the National Responsible Tourism Guidelines, as outlined by the Department of Environmental Affairs and Tourism, are awarded for their successes. The awards cover the full spectrum of issues connected to responsible tourism that include water management under the environmental aspect (Anon, 2005a:1-2).

2.10 ENVIRONMENTAL PROGRAMS

Hospitality establishments in South Africa, through FEDHASA initiatives have the opportunity to affiliate themselves with environmental organisations such as Heritage and The Natural Step (McManus, 2005).

The Natural Step is an international environmental organisation that aims to achieve a common understanding of not only water management practices but environmental management as a whole. Some of the key aspects that are the focus for the Natural Step include the adoption of a shared mental model and understanding of sustainability. The importance of increased motivation and commitment of the workforce is an aspect that can determine the success or failure of any water management practices put in place and has to be handled appropriately. The reduction of the use of the resource, in this case water, in areas within an organisation is a

measurable way to determine the benefits achieved by implementing water management practices. The wastage of water in organisations is also an aspect of concern and methods to reduce the amount of waste generated is an additional key area that the Natural Step focuses on.

They focus on awareness, behaviour, clear vision and direction as the four key aspects of their approach to environmental management with sustainability being critical.

Another key consideration when working with The Natural Step is illustrating that the measure of success is viewed from three dimensions, which are referred to as the triple bottom line. The triple bottom line, Environmental, Social and Economic, illustrates the importance of each of the areas to an establishment (Jacobs, 2005:4). Bohdanowicz, (2005:191), Chan and Wong, (2006:482) and Mensah, (2005:6) substantiate this approach and found that this indicates the importance of all three elements but the hotelier still tends to place the emphasis on profit. The Natural Step, working with Heritage, aims to implement changes to the full spectrum of environmental management practices from a strategic view point (Jacobs, 2005:3).

Heritage is another South African company that has developed an environmental rating program that allows for the measurement of practices taken by establishments within the tourism and hospitality environment (Heritage, 2005). All establishments that join the program are required to adopt and practice the Heritage Charter, which states, “We recognise that our business has an important role to play in protecting and enhancing the environment for future generations and to help secure the long-term sustainability of the tourism industry”. The Charter goes on to state ten areas where an establishment must commit to take action and one of these areas is to minimise the usage of energy, water and materials (Heritage, 2005:11).

Ten areas of commitment:

- To achieve sound environmental practices across the entire operation.
- To comply fully with all environmental legislation.
- To minimise the use of energy, water and materials.
- To minimise waste and to reduce, reuse and recycle the resources consumed by the business wherever practical.
- To reduce pollution to a minimum and where appropriate to treat effluents.
- To invite customers, supplier and contractors to participate in efforts to protect the environment.
- Where possible to work with others in the tourism industry, public agencies and the community to achieve wider environmental goals.
- To provide all employees with the training resources required to meet the organisation's objectives.
- To openly communicate the organisation's policies and practices to interested parties.
- To monitor and record the environmental impacts on a regular basis and compare the performance with the organisation's polices, objectives and targets.

The Heritage Environmental Rating Program has been endorsed by FEDHASA and South African hotels are continually being rated according to world recognised criteria (Anon, 2004a:1). All the hotels that are rated, are advertised in a Responsible, Travel and Accommodation Guide that is available to tourists wishing to visit South Africa. This guide emphasises findings by Bohdanowicz (2005:188) that discovered that tourists are becoming aware of environmental issues and are seeking to support establishments that have recognised environmental practices in place.

Heritage, as part of its contribution to education with regard to environmental matters has developed various water facts and water saving ideas that can be implemented by hoteliers (Anon, 2005b:4). Examples of the type of education they provide include informing hoteliers about the

result of leaving a tap dripping. It can be shown that a tap dripping at a rate of one drop per second can result in 10220 litres of wasted water per year. The understanding that the guest bathroom uses nearly 65% of the water used in a hotel is an important fact to get across to hoteliers. With this information it can be understood that the role of the guest in water saving needs to be considered.

The guest bedroom toilet is an area where water saving can be measured and reduction in water usage can be seen. When the toilet flush volume is reduced, water saving of 20% can be achieved and there would be no inconvenience for the guest. Older toilet cisterns use approximately 11 litres of water, whilst modern toilet cisterns use approximately 6 litres of water and with long term planning and the replacement of toilets in guest rooms the water use in this area can be almost halved. The modern toilet cisterns save water by having a 'dual-flush' or 'multi-flush' device in the toilet. This allows for a light setting for urine and a heavier setting for solid waste.

The shower in a guest bedroom is another area where excessive amounts of water are used and wasted. When low-flow showerheads are used there can be a reduction in water usage by between 50 - 75%.

Areas in the back of house areas that can contribute to water saving include the use of recycled grey water in garden areas. The use of recycled grey water can reduce consumption by 35%. This not only saves on water consumptions but allows for the better utilisation of waste water.

In the kitchen area when tap aerators are installed there is a reduction in the flow in kitchen taps by around 50 – 75% which contributes to additional water savings within the hotel.

All the above mentioned methods of saving take into consideration the incentive to reduce water usage with the least inconvenience to the hotel guest and hotel employees.

2.11 CONCLUSION

In this chapter, the situation analysis of international environmental management issues with the emphasis on water was discussed. Water on the international agenda was examined on a timeline from 1997 to 2005 and beyond. The concept of environmental management systems was examined with the inclusion of the ISO series relevant to environmental management water management practices, both internationally and locally was highlighted as was the water shortage in the City of Cape Town.

The chapter also dealt with FEDHASA initiatives established to assist hoteliers in South Africa with general water management practices and environmental programs that are available to hoteliers to deal with water management. Jointly, the areas covered in this chapter put water management practices into perspective as applicable to hotels within the hospitality industry.

Chapter 3 will focus on the research design for the study and outline the structure of the two questionnaires used in the study of water management practices in selected Cape Town hotels. The chapter will also present the data obtained from the questionnaires completed by representatives of the hospitality industry and guests from the participating hotels.

CHAPTER 3

RESEARCH DESIGN

3.1 INTRODUCTION

Chapter 2 contained the situation analysis of international environmental management issues with the emphasis on water being discussed. Water on the international agenda was examined on a timeline from 1997 to 2005 and beyond. The concept of environmental management systems was examined with the inclusion of the ISO series relevant to environmental management practices, both internationally and locally was highlighted as was the water shortage in the City of Cape Town.

The chapter also dealt with FEDHASA initiatives established to assist hoteliers in South Africa with general water management practices and environmental programs that are available to deal with water management. Jointly, the areas covered in Chapter 2 put water management practices into perspective as applicable to hotels within the hospitality industry.

Chapter 3 will focus on the design of the questionnaires and outline the structure of the two questionnaires used in the study of water management practices in selected Cape Town hotels. The source of the information for the questions and the data collection method will also be discussed. The final section of this chapter will also present the data obtained from the questionnaires completed by representatives of the hospitality industry and guests from the participating hotels.

The survey, relevant to questionnaire 1, (appendix B) was conducted with middle management in hotels with a 3 to 5-star grading in the central business district (CBD) of the City of Cape Town and the Waterfront area. The hotel's information was sourced from the database of the South African Tourism Grading Council based in Pretoria (Tourism Grading Council of South Africa, 2006). Forty four

(44) hotels in the designated area were approached and forty two (42) agreed to participate in the study and completed the questionnaires. The forty four (44) hotels approached consisted of eight (8) 5-star graded hotels, twenty three (23) 4-star graded hotels and thirteen (13) 3-star graded hotels.

The survey, relevant to questionnaire 2, (appendix C) was conducted with guests of the selected hotels and given to the guests by the front office employees. Each participating hotel was given twelve (12) questionnaires, n = 504, to give randomly to guests staying at the respective hotel. The completion of the questionnaire by the guests was voluntary and anonymous.

3.2 DEVELOPMENT OF THE QUESTIONNAIRES

Questionnaires where used to collect empirical data to collect accurate information from a respondent in various formats including short and long questions, open ended and closed questions. Questionnaires are directive in nature as the questions dictate what is being asked with some being more restricted than others. They provide a basic structure with regard to the kind of responses required and how the response must be recorded.

For the study the questionnaires were designed to obtain the data that was required to answer the objectives. The type of data required was quantitative and the questions used were specific with the options of answers being prescribed. The questionnaire had a predetermined structure with instructions for the respondents to follow when answering the various questions. This form of questionnaire was in line with the statistical analysis that was required for the study.

No pilot study was done due to the use of a predominately closed question format and the mini thesis approach. The exclusion of the pilot study is a possible limitation to this study.

The questionnaires were designed to get the respondents to be willing to answer the questions by following general guidelines for questionnaires as discussed by Brotherton (2008:139). The questions needed to be easy to understand with clear instructions for easy completion by respondents. Closed questions rather than open ended questions were used as they provide a simple response technique that is sequenced from easier to harder and general to more specific. The types of questions used were to generate the interest of the respondent in order to keep respondents going. The aim was to give the respondent an understanding of the relevance of the study and therefore be more inclined to complete it. A further guideline followed was to ensure that the questionnaire was structured with appropriate sections which allow for similar ideas to be asked together.

There are various ways in which questionnaires can be administered and for the purpose of the study the questionnaires were hand delivered to the hotel representatives to complete. This required the need to write instructions into the questionnaire to tell the respondents what is required of them and how they should answer the various questions. This was done in an introduction letter, (appendix A) to the hotel representative and a short paragraph at the top of guest questionnaire (appendix C). The need for the instructions are important to control the implementation process in such a manner to ensure consistency between the various respondents which assists in reducing possible errors.

Questionnaires are designed with the respondents ease of completion being of importance. However, for the researcher the ability to analyse the data is important especially when computer analysing software such as SPSS is used. The data obtained from the questionnaire needs to be coded using a predetermined scale of numbers which can be entered into the software. When coding it is important that no zeros are used because this will contaminate calculations that may be required to be performed on the data. For example, if calculations of averages or percentages were

required, the zeros would distort the calculation (Brotherton, 2008:131-151).

3.3 STRUCTURE OF THE QUESTIONNAIRES

The research data was collected by means of anonymous questionnaires. Questionnaire 1 (appendix B) was completed by middle management of the selected hotels. Questionnaire 2 (appendix C) was randomly completed by guests of the selected hotels in order to ascertain possible perceptions towards water management practices experienced by them during their stay in Cape Town.

Questionnaire 1 consists of two (2) sections. Section A contains questions pertaining to the demographic information relevant to the hotel and included the South African Tourism Grading level and the number of rooms in the hotel.

Section B contains questions pertaining to the current situation within the hotel with regard to water management practices such as the importance of water management and the existence of a formal water management policy within the hotel. Control mechanisms used to monitor water usage and water management partnerships are also investigated as part of this study.

The questions used were predominantly closed questions with question 3 of questionnaire 1 designed to obtain information relating to the respondent's level of the hotels current water management status. This question required the respondent to provide an opinion using a five-point Likert scale.

Questionnaire 2 (appendix C) contained six (6) questions of which four (4) required a yes or no response regarding the perception of the respondent, the hotel guest in this instance.

3.4 SOURCE OF INFORMATION FOR THE QUESTIONNAIRES

The situation analysis as presented in Chapter 2 identified areas within the hotel environment that lends itself to enhancing water management practices. These areas were used to focus on specific questions in order to determine the hotels' dealing of water management and the guests' perceptions regarding their choice of hotel's water management practices.

3.5 DATA COLLECTION METHOD

The researcher was of the opinion that a direct and personal approach to the distribution and collection of the completed questionnaires would achieve a better response than a mailed questionnaire. Prior to the questionnaire pack being hand delivered to the hotel a call was made to identify either the Rooms Division Manager or the Front Office Manager. A brief discussion took place with each representative which served as a personal introduction to the researcher and the process regarding the completion of the questionnaires. Within two (2) days of the initial telephonic introduction the questionnaires were delivered to each of the selected hotels. The day following the drop off of the questionnaires a telephone call was made to each recipient to follow up on the completion of the questionnaire, to determine a suitable collection date and to answer any questions of clarity the recipient may have had. Each hotel's representative was handed one (1) copy of questionnaire 1 and twelve copies (12) of questionnaire 2 that they were to hand to randomly selected guests on checking out of the hotel.

Of the forty four (44) hotels selected to be part of the survey, forty two (42) accepted and two (2) declined. Of the forty two (42) hotels that accepted, twenty two (22) did not complete questionnaire 1 and many did not allow their guests to be part of the survey and complete questionnaire 2.

A total of twenty (20) questionnaires 1 were completed and returned. Therefore forty five percent (45%) of the hotels approached participated in the survey and returned completed questionnaires.

The total number of questionnaire 2 to be distributed was five hundred and four (504). A total of seventy eight (78) were completed and returned. Therefore fifteen percent (15%) of the guests targeted completed the survey and returned completed questionnaires.

Attached to each questionnaire 1 was a personally signed, original letter stating the objective of the survey and how the hotel's participation would assist future water management practices within the hospitality industry. A commitment to the confidentiality of the respondents' data was included in the letter as was the assurance of anonymity.

Questionnaire 2 contained a brief explanation regarding the purpose of the questionnaire with regard to establishing the knowledge, attitude and practices of guests with regard to water management practices of their host hotel.

The questionnaires will be reported on in the order that the questions appear on the questionnaire and a suitable table will be given.

3.6 QUESTIONNAIRE ONE – SECTION A

In this section, there were two (2) questions. Each question will be reported on and a table will accompany the results.

3.6.1 STATISTICAL METHODS USED

For the purpose of the study, descriptive statistical calculations were performed using SPSS 16, a computerised statistical package. The calculations deal with frequency tables of the variables.

3.6.2 DEMOGRAPHIC REPRESENTATION OF HOTELS SELECTED TO BE PART OF THE STUDY

QUESTION 1

WHICH SOUTH AFRICAN TOURISM GRADING DOES YOUR HOTEL HAVE?

Rationale for this information

Question 1 was asked to determine the South African Tourism Rating of the hotels that were approached and those that responded. It forms an important part of the study to reflect if there are different views of water management practices within the different grading categories.

Table 3.1 South African Tourism Grading level of hotels approached and responded

	Approached	%	Responded	%
3-star	13	29.5%	8	61.5%
4-star	23	52.3%	7	30.4%
5-star	8	18.2%	5	62.5%
TOTAL	**44**	**100%**	**20**	**45.5%**

Discussion of the results

Table 3.1, illustrates the number of hotels from each grading sector that were approached and illustrates the response rate from the sectors approached. The 3-star grading sector had a 61.5% response rate, a 30.4% response rate for the 4-star grading sector and a 62.5% response rate for the 5-star sector.

Table 3.2 South African Tourism Grading level of hotels that responded to the questionnaire

	N	%
3-star	8	40.0
4-star	7	35.0
5-star	5	25.0
TOTAL	**20**	**100.0**

Discussion of the results

Table 3.2 indicates the response from the representative of the hotels that completed the questionnaire and the star grading of the hotel. Of the hotels that responded, 40% had a grading of 3-stars, 35% were 4-stars and 25% were 5-stars.

QUESTION 2

HOW MANY ROOMS DOES YOUR HOTEL HAVE?

Rationale for this information

Table 3.3 shows the number of rooms each of the participating hotels has. This question was to determine if there are different views of water management practices depending on the size of the hotel.

Table 3.3 Hotel guest rooms available

	N	%
<50 Rooms	8	40.0
51 – 100 Rooms	2	10.0
101 – 150 Rooms	2	10.0
151 – 200 Rooms	1	5.0
201 – 250 Rooms	2	10.0
251 – 300 Rooms	1	5.0
>301 Rooms	4	20.0
TOTAL	**20**	**100.0**

Discussion of the results

The results show that the highest number of respondents represents hotels with less than 50 rooms and more than 301 rooms, 40% and 20% respectively. The hotels with room availability of between 51 and 300 rooms provided either a 5% or 10% response.

3.7 QUESTIONNAIRE ONE – SECTION B

This section comprised twenty four (24) questions, twenty three (23) of which were closed questions. The questions relate to the water management practices utilised within the hotel. Question 3.1 used a 5-point Likert scale to determine the level of importance of environmental issues to the respondent. All the other closed questions required a yes or no response with a selection of options supplied if yes was selected. Question 26 was an open ended question which allowed the respondent to add information about water saving systems installed within the previous 24 months.

3.7.1 STATISTICAL METHODS USED

For the purpose of the study, descriptive statistical calculations were performed using SPSS 16, a computerised statistical package. The majority of the calculations deal with frequency tables of the variables. Cross tabulation tables were also used to display correlations between variables or to compare frequencies within groups based on the results received.

3.7.2 IMPORTANCE OF ENVIRONMENTAL MANAGEMENT ISSUES

Question 3 consists of three sub-questions and deals with environmental issues from the perspective of the hotel, the employees and the guest. The sub-questions will be discussed individually.

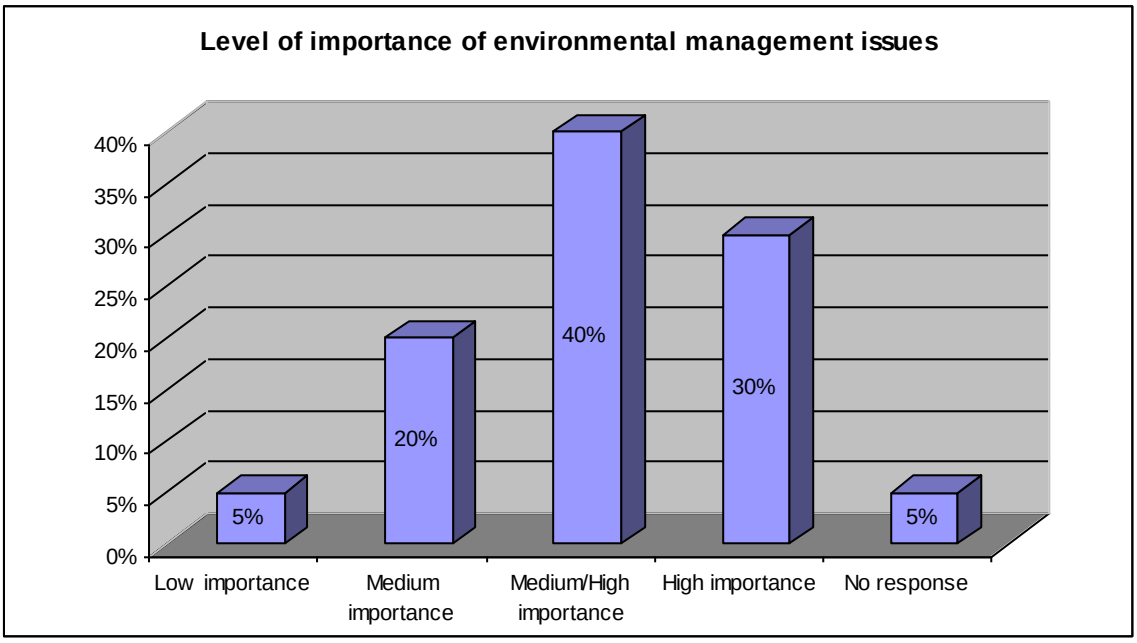
QUESTION 3.1

HOW IMPORTANT ARE ENVIRONMENTAL MANAGEMENT ISSUES IN YOUR HOTEL?

Rationale for this information

This question will provide an indication on how the hotel views the importance of environmental issues within the hotel structure on a 5-point Likert scale from a low importance to a high importance.

Table 3.4 Level of importance of environmental management issues



Discussion of the results

The results show that a medium/high importance and high importance respectively represent 40% and 30% of the respondents' attitudes toward environmental management issues within the hotel.

QUESTION 3.2

DOES HOTEL MANAGEMENT BELIEVE THAT OPERATIONS CAN BE ADAPTED TO BECOME MORE ENVIRONMENTALLY FRIENDLY?

Rationale for this information

Respondents were asked to indicate whether they believe that hoteliers are able to adapt their operational practices in a manner that permits the hotel to become environmentally friendly. Results will indicate if the respondents believe that change can be brought about by possible changes in operations which can be viewed as a starting point for making changes.

Table 3.5 Belief that hotel operations can be adapted to become environmentally friendly

	N	%
Yes	19	95.0
No	0	0.0
No response	1	5.0
TOTAL	**20**	**100.0**

Discussion of the results

Results indicate that 95% of respondents believe that hotel operations can be adapted to become environmentally friendly. One respondent did not complete the question and no respondents felt changes to hotel operations would not lead to an environmentally friendly hotel.

QUESTION 3.3

DOES HOTEL MANAGEMENT BELIEVE THAT HOTEL EMPLOYEES CAN BE MOTIVATED TO SUPPORT AND PARTICIPATE IN ENVIRONMENTAL MANAGEMENT PRACTICES?

Rationale for this information

The role of hotel employees with regard to supporting and being part of a hotel's environmental policy needs to be understood in order to have an inclusive environmental policy. This question aims at determining the belief that management have in staff participation in environmental policies being implemented.

Table 3.6 Belief that hotel employees can be motivated to support and participate in environmental management practices

	N	%
Yes	19	95.0
No	0	0.0
No response	1	5.0
TOTAL	**20**	**100.0**

Discussion of the results

Results mirror the findings of Table 3.5 that showed that 95% of respondents believe staff can be motivated to support and participate in environmental management practices.

Both these results indicate that changes to the operational practices of a hotel and the involvement of staff will be of benefit to environmental practices implemented by them.

3.7.3 ENVIRONMENTAL POLICY

Question 4 through to question 10 deals with the issue of the hotel having an environmental policy and if so, how it is relayed to employees and guests within the hotel environment.

QUESTION 4

DOES YOUR HOTEL CURRENTLY HAVE A POLICY ON ITS ENVIRONMENTAL PRACTICES?

Rationale for this information

This question is to determine whether the hotel has a current policy that deals with environmental practices. The indication that a policy exists will show the hoteliers awareness of environmental management.

Table 3.7 Does the hotel have an environmental policy?

	N	%
Yes	12	60.0
No	7	35.0
No response	1	5.0
TOTAL	**20**	**100.0**

Discussion of the results

The findings on this question indicate that 60% of the respondents do have an environmental policy applicable to their hotel. 35% indicated that they currently do not have a policy and 5% did not respond to the question.

QUESTION 5

IF YES, IS YOUR POLICY A WRITTEN STATEMENT OR AN INFORMAL POLICY?

Rationale for this information

Table 3.7 indicated that 60% of respondents had an environmental policy and question 5 indicates the percentage of these that have a formal written policy in place.

Table 3.8 Format that the hotel policy takes

	N	%
Written statement	7	35.0
Unwritten policy	5	25.0
No response	8	40.0
TOTAL	**20**	**100.0**

Discussion of the results

Table 3.8 indicates the percentage of respondents that have a formal written environmental policy. Of the 60%, identified in Table 3.7, that indicated there was an environmental policy within their hotel, 35% indicated that the policy is a written document and 25% work according to an informal environmental policy.

QUESTION 6

ARE GUESTS ADVISED OF THE HOTEL'S ENVIRONMENTAL POLICY?

Rationale for this information

This question investigates whether guests that stay at the hotel are informed about the hotel's environmental policy. By informing guests about the hotel's environmental policy may indicate the hotelier's commitment to including guests in their initiatives to save water.

Table 3.9 Guests informed about hotel's environmental policy

	N	%
Yes	9	45.0
No	8	40.0
No response	3	15.0
TOTAL	**20**	**100.0**

Discussion of the results

The response to this question indicates that 45% of the hotels that do have an environmental policy in place inform guests of this. Table 3.10 indicates the format in which the environmental policy is communicated to guests of the hotel.

QUESTION 7

IF YES, HOW ARE GUESTS INFORMED ABOUT THE HOTEL'S ENVIRONMENTAL POLICY?

Rationale for this information

Table 3.9 indicates that 45% of hotels with an environmental policy inform their guests about this. This question aims to determine the format of communication regarding the environmental policy. This includes signage, information on arrival and brochures or pamphlets.

Table 3.10 How are guests advised of hotel's environmental policy?

	Signage		Information on arrival		Brochures or pamphlets	
	N	%	**N**	%	**N**	%
Yes	5	25.0	4	20.0	6	30.0
No	6	30.0	7	35.0	5	25.0
No response	9	45.0	9	45.0	9	45.0
TOTAL	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**

Discussion of the results

Table 3.10 shows that 45% of respondents did not respond to this question. Of those that did respond, between 20% and 30% stated that they made use of each of the three methods used to communicate their environmental policy to the guest.

QUESTION 8

ARE GUESTS NOTIFIED OF THEIR ASSISTANCE IN WATER SAVING THROUGH THE FREQUENCY OF TOWEL AND LINEN WASHING?

Rationale for this information

This question investigates whether the hotel's guests are informed about the hotel's policy with regard to water saving and the washing of bedroom linens.

Table 3.11 Are guests advised of the hotel's environmental policy with regard to laundry?

	N	%
Yes	11	55.0
No	9	45.0
TOTAL	**20**	**100.0**

Discussion of the results

The findings of this question, Table 3.11, show that 55% of the respondents inform the guest of the hotel's policy with regard to the washing of bedroom linen in line with the hotel's environmental policy.

QUESTION 9

IS STAFF ADVISED OF THE HOTEL'S ENVIRONMENTAL POLICY?

Rationale for this information

Table 3.6 indicated 95% of respondents believed that hotel employees can be motivated to support and participate in the hotel's environmental practices. Table 3.12, question 9, looks at whether staff is informed about the policy in order to support the environmental practices. Table 3.13 will reflect the manner in which they are informed.

Table 3.12 Is staff advised of hotel's environmental policy?

	N	%
Yes	14	70.0
No	5	25.0
No response	1	5.0
TOTAL	**20**	**100.0**

Discussion of the results

In Table 3.6 the 95% positive response supports question 9. Table 3.12 indicates a high percentage (70%) of hotels inform their employees about the hotel's environmental policy. Table 3.13 indicates the methods used to inform the employees about the hotel's environmental policy.

QUESTION 10

IF YES, HOW IS STAFF INFORMED ABOUT THE HOTEL'S ENVIRONMENTAL POLICY?

Rationale for this information

Respondents that indicated that hotel employees were informed about the hotel's environmental policy were asked to indicate the method of communication used by hoteliers. Respondents were given the option of using signage, training or memorandum as a form of communicating the hotel's environmental policy to staff.

Table 3.13 How is staff advised of hotel's environmental policy?

	Signage		Training		Memos	
	N	%	**N**	%	**N**	%
Yes	4	20.0	8	40.0	11	55.0
No	10	50.0	6	30.0	3	15.0
No response	6	30.0	6	30.0	6	30.0
TOTAL	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**

Discussion of the results

The findings in Table 3.13 indicated the method of communicating the hotel's environmental policy to employees. It indicates all three are used as a form of communication in the hotels. The memorandum format has the highest percentage of use with 55% of responses indicating this method of communication. Signage has the lowest response with 50%. Training has a 40% usage rate as indicated by the respondents. Thirty percent (30%) of respondents for all three forms of communication did not respond to this question.

3.7.4 EFFECTS ON MARKET SHARE IN RELATION TO ENVIRONMENTAL POLICY

Question 11 deals with the belief that having an environmental policy has an effect on the hotels' overall market share.

QUESTION 11

DO YOU BELIEVE THAT BY BEING AN ENVIRONMENT FOCUSED HOTEL YOU WILL INCREASE YOUR HOTEL'S OVERALL MARKET SHARE?

Rationale for this information

Marketing is an important part of any business operation. Within the hotel there is a need to determine whether the environmental practices have an effect on the market share that a hotel attracts.

Table 3.14 Does an environmental focus affect overall market share?

	N	%
Yes	9	45.0
No	7	35.0
No response	4	20.0
TOTAL	**20**	**100.0**

Discussion of the results

In responding to the question of the effects of having an environmental policy on market share it is found that 45%, Table 3.14, of respondents believe that there is a link between having an environmental policy and market share.

3.7.5 METHODS USED TO MONITOR AND CONTROL WATER USAGE

Questions 12 through to 23 deal with whether hotels monitor and control water usage and what methods are used.

QUESTION 12

IS WATER USAGE MONITORED AND CONTROLLED?

Rationale for this information

Before methods of monitoring and controlling water usage in hotels can be established it is important to determine if hotels do in fact monitor and control water usage.

Table 3.15 Is water usage monitored and controlled?

	N	%
Yes	9	45.0
No	9	45.0
No response	2	10.0
TOTAL	**20**	**100.0**

Discussion of the results

An equal number of respondents indicated that they do and do not monitor and control their water usage. This represents 45% each, with 10% not responding to the question (Table 3.15).

QUESTION 13

IF YES, HOW IS WATER USAGE MONITORED AND CONTROLLED?

Rationale for this information

The results shown in Table 3.16 reflect the methods of monitoring and controlling water usage in a hotel. Respondents were given the option of three methods of control. The results of this question indicate the most frequent method of monitoring and controlling water usage in the hotel.

Table 3.16 How is water usage monitored and controlled?

	Flow meters in each department		**Flow meters on each floor**		**Flow meters in each room**		**Other**	
	N	%	**N**	%	%	**N**	%	**N**
Yes	3	15.0	0	0.0	0	0.0	5	25.0
No	5	25.0	8	40.0	8	40.0	3	15.0
No response	12	60.0	12	60.0	12	60.0	12	60.0
TOTAL	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**

Discussion of the results

In review of the results of this question it is apparent that few respondents make use of flow meters in any format to monitor and control water usage. Fifteen percent (15%) of the respondents indicate they use flow meters in each department to monitor departmental water usage but nil respondents make use of flow meters to monitor and control water usage by floor or by individual room. The respondents that indicated another option will be referred to in question 26.

QUESTION 14

HAVE MEASURES BEEN TAKEN TO REDUCE CONSUMPTION? (*I.E.* THE FITTING OF SPRAY TAPS, REDUCING THE QUANTITY OF WATER NEEDED FOR SHOWERS AND TOILETS, PLACING FLOW-RESTRICTORS ON TAPS).

Rationale for this information

Following from Table 3.16, this question investigates whether apart from monitoring and controlling water consumptions, do hotels have methods in place to reduce water consumption. This will then lead to the methods that the hotel makes use of to reduce water consumption as indicated in Table 3.18.

Table 3.17 Have measures been taken to reduce water consumption?

	N	%
Yes	8	40.0
No	9	45.0
No response	3	15.0
TOTAL	**20**	**100.0**

Discussion of the results

Response to question 14 indicates that less than half (45%) of the respondents have water saving measures in place to reduce water consumption. The response indicates that 40% do have measures in place to reduce water consumption with 15% not responding to the question.

QUESTION 15

IF YES, WHICH OF THE FOLLOWING HAVE BEEN IMPLEMENTED?

Rationale for this information

Table 3.18 reflects results of the methods that are used to reduce water consumption within the hotel. Respondents were given the option of four methods. The results of this question indicate the most frequent method used to reduce water consumption in the hotel

Table 3.18 Methods implemented to reduce water consumption

	Fitting of spray taps		Reducing the quantity of water needed for toilet flushing		Changing the water pressure of showers		Placing flow restrictors on taps	
	N	%	**N**	%	**N**	%	**N**	%
Yes	3	15.0	5	25.0	3	15.0	4	20.0
No	5	25.0	3	15.0	5	25.0	4	20.0
No response	12	60.0	12	60.0	12	60.0	12	60.0
TOTAL	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**

Discussion of the results

The results indicate that the most used method of reducing water consumption is achieved by toilet flushing. The results indicate that 25% of respondents making use of this practice with 20% of respondents use the placement of restrictors on taps within the hotel as a method of reducing water consumption. A high percentage, 60%, of respondents of the questionnaire did not respond to any of the methods indicated.

QUESTION 16

ARE WATER LEAKS QUICKLY REPAIRED?

Rationale for this information

The operational procedure for dealing with water leaks within the hotel is investigated in this question.

Table 3.19 Are water leaks quickly repaired?

	N	%
Yes	20	100.0
No	0	0.0
TOTAL	**20**	**100.0**

Discussion of the results

All respondents responded positively to this question with a 100% of responses indicating that water leaks are dealt with quickly.

THE QUESTION 17

IS RECYCLED OR 'GREY' WATER USED?

Rationale for this information

The question sets out to determine whether hoteliers make use of recycled or grey water within their operations. The use of recycled or grey water within the outside garden areas can be a method of decreasing water consumption within the hotel.

Table 3.20 Grey water usage

	N	%
Yes	1	5.0
No	14	70.0
No response	5	25.0
TOTAL	**20**	**100.0**

Discussion of the results

There is a significant lack of recycled or grey water used in hotels as indicated by the response to this question. Results in Table 3.20 indicate that 5% of respondents indicated they make use of recycled or grey water and 70% indicated they do not.

QUESTION 18

ARE WATER SPRINKLER SYSTEMS CORRECTLY MAINTAINED?

Rationale for this information

Table 3.19 reflects the manner in which hotels deal with faults that effect water consumption. Question 18 determines whether hotels make use of properly maintained water sprinkler systems. When correct maintenance is in place minimal leaks should arise. The indication of preventative maintenance may indicate a water saving approach to maintenance by the hotelier.

Table 3.21 Maintenance of water sprinkler systems

	N	%
Yes	12	60.0
No	3	15.0
No response	5	25.0
TOTAL	**20**	**100.0**

Discussion of the results

The results indicate that 60% of respondents do correctly maintain their water sprinkler systems. The less than 100%, with regard to correct operational procedures, is significant in relation to Table 3.19 which indicated a 100% positive response to question 16 regarding water leaks being quickly repaired.

QUESTION 19

ARE THERE ANY WATER SAVING SYSTEMS AND PROCEDURES USED IN YOUR HOTEL?

Rationale for this information

Water saving systems and procedures in their totality can influence the water saving of a hotel. This question sets out to determine whether hotels have specific water saving systems and procedures in place. Table 3.23 illustrates which water saving systems and procedures are utilised by hotels.

Table 3.22 Water saving systems in use in the hotel

	N	%
Yes	11	55.0
No	7	35.0
No response	2	10.00
TOTAL	**20**	**100.0**

Discussion of the results

The results indicate that 55% of respondents do have some sort of water saving system and procedure in place to deal with water management. This result is slightly lower than the responses in Table 3.7 which indicated that 60% of respondents had a policy on its environmental performance. Water saving systems and procedures should form part of an environmental management policy and this is shown in the results of these two questions.

QUESTION 20

IF YES, WHICH IF THE FOLLOWING DO YOU HAVE IN PLACE?

Rationale for this information

Respondents that responded positively as shown in Table 3.22 were asked to indicate the method of water saving system and procedure used. Options available to select from were:

- Stopcocks.
- Department metering.
- Pressure reducing values.
- Timed irrigation.
- Dual-flush toilets.
- Low-flush toilets.
- Restrictors.

Table 3.23 Water saving devices used

	Stopcocks		Department metering		Pressure reducing values		Timed irrigation		Dual-flush toilets		Low-flush toilets		Restrictors	
	N	%	**N**	%	**N**	%	**N**	%	**N**	%	**N**	%	**N**	%
Yes	5	25.0	2	10.0	4	20.0	9	45.0	5	25.0	2	10.0	3	15.0
No	7	35.0	10	50.0	8	40.0	3	15.0	7	35.0	10	50.0	9	45.0
No response	8	40.0	8	40.0	8	40.0	8	40.0	8	40.0	8	40.0	8	40.0
TOTAL	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**

Discussion of the results

Timed irrigation is the most used method of water saving with 45% of respondents making use of this method. The least used methods are department metering and low-flush toilets with 10% of respondents using these methods. The results indicate 40% or respondents did not respond to this question.

QUESTION 21

IS PREVENTATIVE MAINTENANCE PERFORMED ON TAPS, PIPES AND OTHER WATER EQUIPMENT?

Rationale for this information

The question investigates whether hotels have maintenance procedures in place that deal with the taps, pipes and other water equipment. Preventative maintenance is important due to when equipment is properly maintained and regularly checked the possibility of leaks and water wastage are reduced and water saving occurs.

Table 3.24 Maintenance of taps, pipes and other water equipment

	N	%
Yes	12	60.0
No	4	20.0
No response	4	20.0
TOTAL	**20**	**100.0**

Discussion of the results

The results indicate that 60% of respondents do have maintenance procedures in place to ensure preventative work is carried out on taps, pipes and other water equipment. 20% of respondents responded negatively. The remaining 20% did not respond to the question.

QUESTION 22

WHAT TYPE OF TOILET FLUSH SYSTEM IS USED IN YOUR HOTEL?

Rationale for this information

The question was to determine which type of toilet flush system is used by hotels in the sample group. Two options were given with the first being the one flush option and the other being a two flush option.

Table 3.25 Toilet flush systems used

	N	%
One flush option	17	85.0
Two flush option	3	15.0
TOTAL	**20**	**100.0**

Discussion of the results

The results show that the 85% of hotels make use of a one flush option toilet system and 15% use a two flush option.

QUESTION 23

WHAT TYPE OF GARDEN WATER SYSTEM DOES YOUR HOTEL HAVE?

Rationale for this information

The question allows for the distinction between two methods of garden water systems. The first being the central sprinkler system and the second being a manual hose pipe. Central sprinkler systems can be set up with timer devices to control the length of time for the watering of gardens. Water hoses not only require a staff member to do the watering but can lead to excessive watering due to possible unattended water hoses.

Table 3.26 Garden water systems used

	Central Sprinkler System		Manual – Hose Pipe	
	N	%	**N**	%
Yes	10	50.0	6	30.0
No	5	25.0	9	45.0
No response	5	25.0	5	25.0
TOTAL	**20**	**100.0**	**20**	**100.0**

Discussion of the results

The results indicate that hotels make use of both methods of water systems with 50% of respondents indicated that they make use of a central sprinkler system and 30% indicated they make use of a manual hose pipe.

3.7.6 ENVIRONMENTAL ORGANISATIONS

This question deals with the hotel's membership of environmental organisations', local, national and international.

QUESTION 24

IS YOUR HOTEL INVOLVED IN ANY PARTNERSHIPS WITH ENVIRONMENTAL ORGANISATIONS?

Rationale for this information

This question aims to determine whether hotels within the sample population have involvement with specialist environmental organisations. Respondents were given options of particular environmental organisations that operate either locally, nationally or internationally.

Table 3.27 Partnerships with environmental organisations

	Heritage		Natural Step		Green Trust		Green Globe		International Hotels Environmental Initiative		Other	
	N	%	**N**	%	**N**	%	**N**	%	**N**	%	**N**	%
Yes	3	15.0	2	10.0	0	0.0	0	0.0	1	5.0	5	25.0
No	7	35.0	8	40.0	10	50.0	10	50.0	9	45.0	5	25.0
No response	10	50.0	10	50.0	10	50.0	10	50.0	10	50.0	10	50.0
TOTAL	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**	**20**	**100.0**

Discussion of the results

Table 3.27 indicates The Heritage organisation received the highest acknowledgement by the respondents with 15% indicating that they have a partnership with them. 10% of respondents indicated that their choice of environmental organisation partner was The Natural Step, another local organisation. Two of the international environmental organisations, which are referred to in the study, received a 0% response rate with 5% of respondents identifying a partnership with the International Hotels Environmental Initiative. The largest response was 25% that indicated that they make use of other environmental organisation not included in the study.

Table 3.28 Relationship between star grading and partnerships with environmental organisations.

	Star Grading 3		**Star Grading 4**		**Star Grading 5**	
	N	%	**N**	%	**N**	%
Heritage	0	0%	2	100.0%	1	16.7%
The Natural Step	2	66.7%	0	0%	0	0%
Greentrust	0	0%	0	0%	0	0%
Green Globe	0	0%	0	0%	0	0%
International Hotels Environmental Initiative	0	0%	0	0%	1	16.7%
Other	1	33.3%	0	0%	4	66.6%
TOTAL	**3**	**100%**	**2**	**100%**	**6**	**100%**

Discussion of the results

Table 3.28 shows the frequency in which responding hotels associate with environmental organisations. The results show that the 5-star grading, have a tendency to partner with environmental organisations. The 3-star grading hotels showed three partner with an environmental organisation and the 4-star grading hotels showed two partnerships.

3.7.7 CURRENT INITIATIVES PUT IN PLACE BY THE HOTEL

This question deals with new initiatives that hotels have put into place in the last 24 months to deal with water saving procedures.

QUESTION 25

HAS YOUR HOTEL ADDED IN THE LAST 24 MONTHS ANY RESOURCES TO THE PROPERTY THAT ALLOW FOR WATER SAVING?

Rationale for this information

In light of the current water restrictions the hotels in the sample population operate in, the question aims to determine whether in the past 24 month period any new water saving resources have been added.

Table 3.29 Current water saving initiatives

	N	%
Yes	4	20.0
No	12	60.0
No response	4	20.0
TOTAL	**20**	**100.0**

Discussion of the results

For the period July 2005 to July 2007, the 24 month period in review of this study, respondents indicated that 20% of hotels in the sample population have installed new water saving devices. The results indicate that 60% did not have any new installation of water saving devices and 20% did not respond to the question.

QUESTION 26

IF YES, PROVIDE A BRIEF EXPLANATION OF THE SAVING SYSTEMS AND PROCEDURES (E.G.: LIST ANY WATER SAVING DEVICES OR SYSTEMS USED).

Rationale for this information

Table 3.29, indicates that 20% of respondents did implement procedures in the previous 24 months that would assist in saving water. This open ended question allows the respondents to indicate what measure or procedures had been implemented by the hotel.

Summary of water saving systems and procedures used:

- Aerated taps.
- Remote water sprinklers in gardens.
- No car washing allowed.
- Switch off irrigation in winter.

Discussion of the results

As Table 3.29 indicated, 4 respondents completed this open ended question and shared the water saving procedures they put in place in the last 24 months.

3.8 QUESTIONNAIRE TWO

The questionnaire, (appendix C), had a total of six (6) closed questions for the guest to complete. Each question will be reported on and a table will accompany the results.

3.8.1 STATISTICAL METHODS USED

For the purpose of the study, descriptive statistical calculations were performed using SPSS 16, a computerised statistical package. The majority of the calculations deal with frequency tables of the variables. Cross tabulation tables are used to determine the relationship between variables where appropriate.

To test the significance of the assumptions and perceptions the Chi-square ($\chi 2$) test of independence or no association is used.

In a test of independence there are two factors of interest each one with two of more levels. In general the null hypothesis is formulated as:

Ho : The two factors are independent.
Ha : The two factors are dependent.

For the purpose of the analysis this will be the hypothesis for all the tests conducted and it will therefore not be repeated each time.

The equation to test for independence is given by:

$$\chi^2 = \sum \frac{(f_0 - f_e)^2}{f_e}$$

where:

$\chi 2$ = Chi-square test statistic.
f0 = observed frequencies (the actual situation as obtained from the questionnaire).
fe = expected frequencies (the number of frequencies expected when the null-hypothesis is true, in other words under independence).

The expected frequencies are calculated as follows:

1. Determine in which row is the cell for which the expected frequency is calculated.
2. Determine in which column is the cell for which the expected frequency is calculated.
3. Take the total of the row in (1) above and multiply with the total of the column in (2) above.
4. Divide by the grand total to arrive at the expected frequency for the specific cell.

The decision rule is based on the p-value. The p-value is actually a calculated significance value. The smaller the value of p, the closer to zero, the higher the probability that the null-hypothesis will be rejected.

All statistical programs use the p-value as a decision making instrument and the researcher used the same principle. A p-value of less than 0.05 shows there is dependence and therefore correlation between the variables. A p-value that is equal to or greater than 0.05 shows there is independence between and therefore no correlation between the variables. Therefore if for example the p-value is equal to 0.00 then there is significant statistical evidence that the variables of interest are dependent on each other.

3.8.2 DEMOGRAPHICS OF RESPONDENTS

The first two questions for the guest to complete dealt with the general demographics of the respondents to determine their country of origin and their age.

QUESTION 1

WHERE ARE YOU FROM?

Rationale for this information

Table 3.30 shows the country of origin of the guests that took part in the study. It is an important part of the study that will determine the knowledge, attitudes and practices of local and international guests to the hotels within the designated area of this study with the aim of determining any trends that may exist.

Table 3.30 Country of origin of respondents

	N	**%**
Africa – excluding South Africa	6	7.7
Asia	5	6.4
Australia	3	3.8
Europe	13	16.7
New Zealand	4	5.1
North America	4	5.1
South Africa	39	50.0
South America	3	3.8
No response	1	1.3
TOTAL	**78**	**100.0**

Discussion of the results

South African citizens represent 50% of the respondents that completed the questionnaire with 16% representation from Europe being the second highest nationality. All respondents, with the exception of one, indicated their nationality.

QUESTION 2

WHAT IS YOUR AGE GROUP?

Rationale for this information

This question aims to find out the age grouping of the various guests that responded to determine which age group was the most prevalent. Table 3.38 illustrates the relationship between age and the preference of hotel.

Table 3.31 Age group of respondents

	N	%
<20	2	2.6
21 – 30	15	19.2
31 – 40	27	34.6
41 – 50	24	30.8
51 – 60	5	6.4
61 - 70	5	6.4
>70	0	0.0
TOTAL	**78**	**100.0**

Discussion of the results

In Table 3.31 the results indicate that the age groups 31 – 40 and 40 – 50 represented 34.6% and 30.8% respectively. The group with the lowest response is the under 20 age group with only 2.6% of the questionnaires being completed by this group.

3.8.3 KNOWLEDGE, ATTITUDES AND PRACTICES OF GUESTS

Questions 3 to 6 of the questionnaire deals with questions that will indicate the knowledge, attitudes and practices of the guest with regard to water management and environmental friendly hotels.

QUESTION 3

WOULD YOU PREFER TO STAY IN AN ENVIRONMENTAL FRIENDLY HOTEL?

Rationale for this information

The question is intended to determine whether guests at the various hotels prefer to stay at a hotel that is environmentally friendly. This will determine whether guests to South African hotels are aware of environmental issues and seek this in the hotels they stay in.

Table 3.32 Preference of hotel

	N	%
Yes	68	87.2
No	10	12.8
TOTAL	**78**	**100.0**

Discussion of the results

The response to this question indicates that 87.2% of the guests that completed the questionnaire do prefer to stay at a hotel that they consider environmentally friendly (Table 3.32).

QUESTION 4

ARE YOU AWARE OF ANY WATER RESTRICTIONS IN CAPE TOWN?

Rationale for this information

The question is to determine whether the guests that completed the questionnaire are aware that there are water restrictions in Cape Town. This can indicate whether the information regarding water restrictions in Cape Town has been made known nationally and internationally and whether guests through interaction with staff or literature in their bedrooms have been made aware of the current situation in Cape Town.

Table 3.33 Water restriction awareness

	N	%
Yes	37	47.4
No	41	52.6
TOTAL	**78**	**100.0**

Discussion of the results

The results show 52.6% of the guests that completed the questionnaire are not aware that the City of Cape Town has water restrictions in place (Table 3.33).

QUESTION 5

DO YOU BELIEVE A GUEST SHOULD TRY TO SAVE WATER WHILST STAYING IN A HOTEL?

Rationale for this information

The question aims to determine whether the guests that completed the questionnaire believe that a guest should try and save water during their stay in a hotel. This can determine the guests' attitude towards water saving and a possible correlation to the results reflected in Table 3.33 as shown in Table 3.37.

Table 3.34 Guest participation in water saving

	N	%
Yes	71	91.0
No	6	7.7
No response	1	1.3
TOTAL	**78**	**100.0**

Discussion of the results

Ninety one percent (91%) of the guests that completed the questionnaire believe that a guest should try and save water whilst in a hotel (Table 3.34).

QUESTION 6

DO YOU THINK YOUR HOTEL IS AN ENVIRONMENTAL FRIENDLY HOTEL?

Rationale for this information

This question aims to determine the perception of the guests that completed the questionnaire with regard to them considering the hotel they stayed in, is according to them, environmentally friendly. This question is based on perception on what is environmentally friendly. Each guest will have their own ideas based on their experience with the hotel employees and literature available to them.

Table 3.35 Perceptions of hotel as an environment friendly hotel

	N	**%**
Yes	61	78.2
No	10	12.8
No response	7	9.0
TOTAL	**78**	**100.0**

Discussion of the results

Of those that responded to this question, 78.2% believe that the hotel that they stayed in was perceived as being an environmental friendly hotel. 12.8% did not perceive this to be so. (Table 3.35).

COMPARISON 1

DO THOSE GUESTS THAT WOULD LIKE TO STAY IN AN ENVIRONMENTALLY FRIENDLY HOTEL PERCEIVE THE HOTEL THEY ARE STAYING IN AS BEING ENVIRONMENTALLY FRIENDLY?

Rationale for this comparison

Table 3.32 and Table 3.35 are cross tabulated in order to determine whether guests that prefer to stay in an environmental friendly hotel perceive that they have chosen to stay in such a hotel. The results are reflected in Table 3.36.

Table 3.36 Relationship between those that seek to stay in an environmentally friendly hotel and their perceptions of the hotel they chose to stay in

Chi-Square Test

	Value	df	P Value
Pearson Chi Square	14.648[a]	1	0.000

a. 1 cell (25.0%) has an expected count less than 5. The minimum expected count is 1.27.

Discussion of the results

By using the formula of Section 3.8.1 a test statistic value of 14.648 with a p-value of 0.000 is obtained. The null-hypothesis of independence is rejected in favour of the alternative hypothesis of dependence as the p-value is less than .05.

There is therefore statistical evidence that there is a significant relationship between those that seek to stay in an environmentally friendly hotel and their perceptions of the hotel they chose to stay in.

COMPARISON 2

DO GUESTS THAT KNOW THERE ARE WATER RESTRICTIONS IN CAPE TOWN BELIEVE THAT A GUEST SHOULD TRY TO SAVE WATER WHILST STAYING IN A HOTEL?

Rationale for this information

Table 3.33 and Table 3.34 are cross tabulated in order to determine whether guests that are aware of water restrictions in Cape Town believe that a guest should try and save water whilst staying in a hotel.

Table 3.37 Relationship between those that are aware of water restrictions in Cape Town and their belief that guests should try and save water when staying in a hotel

Chi-Square Test

	Value	df	P Value
Pearson Chi Square	6.019[a]	1	0.014

a. 2 cells (50.0%) have expected counts of less than 5. The minimum expected count is 2.88.

Discussion of the results

By using the formula of Section 3.8.1 a test statistic value of 6.0198 with a p-value of 0.014 is obtained. The null-hypothesis of independence is rejected in favour of the alternative hypothesis of dependence as the p-value is less than .05.

There is therefore statistical evidence that there is a significant relationship between those that are aware of water restrictions in Cape Town and their belief that guests should try and save water when staying in a hotel.

COMPARISON 3

DOES THE AGE OF A GUEST INFLUENCE THEIR PREFERENCE TO STAY IN AN ENVIRONMENTALLY FRIENDLY HOTEL?

Rationale for this information

Table 3.31 and Table 3.32 are cross tabulated in order to determine whether the age of a guest has an influence of the preference to stay in an environmentally friendly hotel.

Table 3.38 Relationship between age and preference of hotel?

Chi-Square Test

	Value	df	P Value
Pearson Chi Square	8.718[a]	5	0.121

a. 9 cells (75.0%) have expected counts of less than 5. The minimum expected count is 0.26.

Discussion of the results

By using the formula of Section 3.8.1 a test statistic value of 8.718 with a p-value of 0.121 is obtained. The null-hypothesis of independence (no difference) is accepted at all levels of significance, as the p-value is larger than .05.

There is statistically no evidence that there is a significant relationship between the age of a guest and their preference of hotel.

COMPARISON 4

DOES THE COUNTRY OF ORIGIN OF THE GUEST INFLUENCE THE PREFERENCE TO STAY IN AN ENVIRONMENTAL FRIENDLY HOTEL?

Rationale for this information

Table 3.30 and Table 3.32 are cross tabulated in order to determine whether the country of origin has any influence on the preference to stay in a hotel that is environmentally friendly. For the purpose of this comparison, the county of origin is based on those guests from the African continent and those from the rest of the world.

Table 3.39 Relationship between the country of origin of the guest and their preference to stay in an environmental friendly hotel?

Chi-Square Test

	Value	df	P Value
Pearson Chi Square	6.993[a]	15	0.008

a. 1 cell (25.0%) has an expected count of less than 5. The minimum expected count is 4.16.

Discussion of the results

By using the formula of Section 3.8.1 a test statistic value of 6.993 with a p-value of 0.008 is obtained. The null-hypothesis of independence is rejected in favour of the alternative hypothesis of dependence as the p-value is less than .05.

There is statistical evidence that there is a significant relationship between the country of origin and the preference to stay in an environmental friendly hotel. Non-African respondents were significantly more environmentally aware when compared to their African counterparts.

3.9 CONCLUSION

Chapter 3 focused on the design of the questionnaires and outlined the structure of the two questionnaires used in the study of water management practices in selected Cape Town hotels. The source of the information for the questions and the data collection method was also discussed. The final section of this chapter presented the data obtained from the questionnaires completed by representatives of the hospitality industry and guests from the participating hotels.

The emphasis of Chapter 3 has been on interpreting the data gathered to establish the knowledge, attitudes and practices of selected hotels in the central business sector of Cape Town, Western Cape. The chapter has also interpreted the perceptions of the guests within the targeted group.

The data has been presented in a way to assist the researcher in achieving the objectives of the study.

The data that was collected was presented in two parts based on the two questionnaires used in the study. Questionnaire 1 is presented in two sections. Section A's data relates to the star grading of the hotels that took part in the study and the number of rooms available in the hotel.

Section B's data relates to how important the hotel's management perceives environmental management issues to be, the type of environmental policy utilised by the hotel and how they perceive the relationship between market share and environmental policy. The section

also reflects on the methods used by the hotel to monitor and control water usage. In the final two sections under Section B the relationship between the hotel and various environmental organisations and the initiatives the hotel had put in place in recent times are reported.

The data collected from questionnaire 2 is presented in two sections. The first section relates to the demographic information of the respondents *i.e*. such as country of origin and age.

The second section relates to the respondents perceptions regarding their preference of hotel together with their knowledge and attitude towards the water shortage in Cape Town and the saving of water by a hotel guest.

The following chapter, Chapter 4, will reflect the findings of the empirical study by means of analysis, interpretation and discussion of the results.

CHAPTER 4

ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

Chapter 3 focused on the design of the questionnaires and outlined the structure of the two questionnaires used in the study of water management practices in selected Cape Town hotels. The source of the information for the questions and the data collection method was also discussed. The final section of Chapter 3 presented the data obtained from the questionnaires completed by representatives of the hospitality industry and guests from the participating hotels.

This chapter will present the analysis, interpretation and discussion of the results of the data contained in the previous chapter. The objectives of the study will be the reviewed in conjunction with the analysis, interpretation and discussion with the aim to provide evidence in favour or not in favour of the findings of the situation analysis done in Chapter 2.

4.2 FINDINGS AND DISCUSSION OF RESULTS

The specific research objectives of the study as stated in Chapter 1 are to:

- Determine what water management practices are being implemented in selected Cape Town hotels.
- Determine what water management programs or initiatives are available to hotels in Cape Town.
- Determine whether selected hotels in the Cape Town conform to international water management practices.
- Determine whether guests are sensitive to the water management practices applied in selected Cape Town hotels.

- Develop recommendations for the implementation of water management practices for Cape Town hotels.

The data presented in Chapter 3 is interpreted, analysed and discussed with regard to how the results meet the objectives of the study.

4.2.1 Determine what water management practices are being implemented in selected Cape Town hotels

The study shows in Table 3.1 that 45% of the hotels that were approached to be part of the study agreed to complete the questionnaire. Table 3.1 also indicates there was a marked difference in the willingness to complete the questionnaire between the 3 and 5-star graded hotels and the 4-star graded hotels. Sixty one percent (61.5%) of the 3-star graded hotels and 62.5% of the 5-star graded hotels agreed to be part of the study and only 30.4% of the 4-star graded hotels were willing.

The researcher finds that in view of the relationship between star grading and partnerships with environmental organisation, Table 3.28, the 5-star graded hotel showed a higher tendency to partner with environmental organisations which may have influenced the level of commitment to be part of the study. The possible environmental awareness by the hoteliers may have lead to the representative that completed the questionnaire being aware of the significance of the study.

The results shown in Table 3.3 indicate that the smaller hotels were well represented in the study with regard to completing the questionnaire. Forty percent (40%) of the hotels identified were in the group with less than 50 guest bedrooms. A possible explanation for this may be the smaller establishments have fewer staff which allows for communication about environmental issues to be achieved more effectively.

Questions 3.1, 3.2 and 3.4 were asked of the respondents to determine how hoteliers perceive the importance of environmental issues. Table 3.4 indicates that a combined 70% perceive environmental issues to be of medium to high level of importance. The findings represented in Table 3.5 and Table 3.6 indicates that the overwhelming majority of respondents, 95% do believe that employees can be motivated to support and participate in environmental management practices. In both cases it shows that there is the belief that hotel operations and staff motivation can be improved to the benefit of the hotel when dealing with environmental issues.

The researcher finds that if there is any sort of environmental awareness within the hotel the benefits can be seen by all that work in the establishment. In Chapter 2 the issue of the benefits of environmental issue were identified, (Jacobs, 2005:9) with the reference of the triple bottom line which includes environmental, social and economic aspects. This is significant as this links to the hotel operation which influence one or more of these three aspects.

Table 3.7 indicates that 60% of those hotels that were part of the study have an environmental policy. Thirty five percent (35%) of those that do have a policy indicated that they have a formal written policy as indicated in Table 3.8. The researcher finds that these findings correspond with the situation analysis discussed in Chapter 2 that indicates that having an environmental policy is regarded significant due to social and financial recognition, (Kirk, 1998:33-47). Jacob's (2005:9) triple bottom line concept may also be a determining factor for having an environmental policy as the results are then measured against the policy. Those that indicated that they have an environmental policy is relevant to Kirk's (1998:33-47) findings that referred to there being no relationship between the type of hotel and having a written policy.

Table 3.9 indicates 45% of those hotels that were part of the study indicated that the guests of the hotel are informed about their environmental policy through either signage, information on arrival or brochures and pamphlets. Table 3.10 indicates that the most common form of communication of environmental issues is through brochures and pamphlets. Brochures and pamphlets were slightly more popular as a medium to communicate with guests and possible reasons for this could be that the guest is able to read through the literature at their leisure and if translated could be read in their mother tongue. Staff may not always have the time to discuss the environmental program with the guest and therefore signage, brochures and pamphlets were the preferred form of communication over giving the information on arrival.

When considering water management as a form of environmental awareness, Table 3.11 indicates that 55% of the hotels inform their guests about their environmental policy with regard to bedroom linen and laundry savings. This is low considering the situation analysis of Chapter 2 that indicates that laundry areas are an area of high water usage as referred to by Deng and Burnett (2002:59-60).

The study shows that together with informing guests about the hotel's environmental policy, staff is also informed about it as reflected in Table 3.12. The findings show that 70% of the respondents indicated staff are informed about the environmental policy. The most frequent method of communication of issues related to the hotel's environmental policy to staff is through memorandums as indicated by the 55% value in Table. 3.13. Staff training is also of significant importance to the hotel as 40% indicate training as a method of communication of the hotel's environmental policy.

The researcher found in the analysis of the water management situation in Chapter 2, that the mention of staff with regarding to environmental issues and especially water saving was relevant in many instances. Three references to the relevance were noted as indicted by the following

examples. The MOA between the DWAF and FEDHASA included the mention of awareness campaigns and information sessions for employees (Department of Water Affairs and Forestry, 2004:2-3). FEDHASA guidelines also encourage staff to change their water habits (Anon, 2005c:14). Sherratt (2005:4) in identifying a strategy that can be influenced by various factors also referred to staff participation in the recommendation for Best Practice.

Table 3.14 indicates that 45% of the hotels that were part of the study believe that having an environmental focus has an effect on the market share of the hotel. The researcher believes this is in line with the findings of the study as recorded in Chapter 2. Chan and Wong (2006:484) refer to gaining a competitive advantage as one of the reasons that hoteliers adopt ISO 14001 standards.

The study has shown that the hotels make use of various methods to monitor and control water usage. Table 3.16 through Table 3.26 indicate the various methods used by hotels to monitor and control water usage on an operational level with the areas of importance being identified. The methods used were given in the structured questionnaire based on the finding of the study as reported in Chapter 2. Deng & Burnett (2002:65) refer to metering as a key element of a water management program. FEDHASA (Van Niekerk, 2004a) provide hotel managers with examples of short term measures to reduce water consumption in light of regional water restrictions that all residents of the City of Cape Town are subject to. These examples where used as a basis for the options available to the respondents when answering questions related to methods used to save and manage water. The researcher finds that hoteliers have taken heed of the advice available and implemented certain of the saving measures as indicated in the results of questions 13 to 23.

There was no difference between the percentage of respondents that did or did not monitor and control the water usage in the hotel. Table 3.15

indicates that 45% of respondents did monitor and control water usage and 45% of respondents did not monitor and control water usage. Further analyses of this aspect of the study indicated that even where hotels do monitor and control water usage they did not give a response to the methods used. Fifteen percent (15%) of those that did respond indicated that flow meters in each department were used with 25% indicating other methods being used.

Albeit hotels have methods to monitor and control water usage, Table 3.17 indicates that 45% of respondents do not have measures in place to reduce water consumption. Of the 40% that indicated that they do have measures to reduce water consumption, the most common measure was the reduction of the quantity of water needed for toilet flushing. Table 3.18 indicates that 25% of those that responded make use of this measure and 20% place flow restrictors on taps in the hotel.

The importance of the monitoring and control of water usage is also reflected in the responses illustrated in Table 3.22 which indicates that 55% of hotels that participated do have water saving systems. The water saving devices that are most common are: timed irrigation systems (45%), dual flushing toilets (25%), and stop cocks (25%) as shown in Table 3.23. Table 3.25 reflects that 85% of hotels that participated have only one flush option available on the toilets. This corresponds with the low percentage of hotels that have dual flushing toilets in the hotel.

The one question in the study that received a 100% positive response was related to the hotel's operation of repairing water leaks quickly as reflected in Table 3.19. Table 3.21 indicated a slightly lower percentage of respondents that indicated that they properly maintain the water sprinkler systems in their hotels. Only 60% responded that they do maintain their water sprinkler systems. The results of the above are reinforced by the results as illustrated in Table 3.24 which show that 60% of the hotels

made use of preventative maintenance on tapes, pipes and other water equipment as a form of water saving.

Grey water usage by the hotels that responded to the questionnaire is not an area of concern to hotels with only 5% indicating that they make use of it and that 70% do not as illustrated in Table 3.20.

Following from Table 3.21 that focused on water sprinkler maintenance Table 3.26 indicates that 50% of hotels do make use of a central sprinkler system.

The findings from the questions relevant to the objective of determining what water management practices are being implemented in selected Cape Town hotels concurs with the findings of Chapter 2. The various authors, Van Niekerk (2004a), Clouden and Singh (1999:18), Bohdanowicz (2006:672-673) and Deng and Burnett (2002:64), referred to, put forward many suggestions with regard to water management and saving and from the sample of hoteliers that took part in this study it seems the hoteliers in selected Cape Town hotels are in line with international, national and local trends with regard to water management practices.

4.2.2 Determine what water management programs or initiatives are available to hotels in Cape Town

Table 3.4 indicates that 90% of the respondents place a medium to high level of importance on environmental issues within the hotel. Furthermore, 95% of the respondents, Table 3.5, were of the belief that hotel operations can be adapted to become environmentally friendly and employees can be motivated to support and participate in environmental management practices. These two sets of results indicate that water management programs have a role to play in a hotel both from an employee and operations perspective.

Table 3.27 and Table 3.28 focus specifically on the various environmental partnerships that the hotels are linked to. The local Heritage environmental organisation had the highest linkage with 15% of the hotels indicating they have a partnership with this organisation. Twenty five percent (25%) of respondents indicated that they have linkages to other organisations other than Heritage, Natural Step, Green Trust, Green Globe or International Hotels Environmental Initiative.

The researcher in compiling the questionnaire for the hotel representative provided a list of environmental organisations. The organisations selected were a result of the study done in Chapter 2 that revealed information about environmental programs globally, nationally and locally. One of the two global role players identified in the study, IHEI, focuses on how hotels can improve their environmental management practices (International Hotels Environment Initiative, 2005:1). The IHEI is involved in study into consumption patterns with regard to utility costs portioned to water and methods to monitor and control water use is linked to this (International Hotels Environment Initiative, 1993:31).

The second global role player, Green Globe 21, is an organisation that has put forward recommendations for hoteliers for a starting point when implementing water management practices. Chapter 5 refers to recommendations for an eleven step process that hoteliers can use when initiating work in the water management field (Anon, 2008a:2-3).

There are two national, local role players referred to in the study, Heritage and The Natural Step. FEDHASA endorses both organisations and encourages hoteliers to seek endorsement from these environmental organisations. The results indicate that there is a minimal awareness of these organisations as the 15% and 10% indicates in Table 3.27. The researcher notes that the collective 25% that are in partnership with these two organisations is equal to the 25% that partner with other environmental organisations not covered in the scope of the study.

Twenty percent (20%) of hotels that took part in the study indicated that in the last 24 months they had put into place new initiatives with regard to water management. Table 3.29 shows that the majority of hotels, 60%, have not put any new initiatives in place with regard to water management practices.

Of those that responded that they had put in new water saving practices within the last 24 months, these were:

- Aerated taps.
- Remote water sprinkler in gardens.
- No car washing allowed.
- Switch off irrigation in winter.

The researcher finds that the limited response to this question could be due to many of the methods used in order to reduce water consumption were included as options within the questionnaire. The high indication of those that have not implemented any changes could result in the cost factor involved with making changes as presented by the various medium to long term measures indicated by Van Niekerk (2004a) as part of the initiatives put forward by FEDHASA.

This objective of the study, to determine what water management program or initiatives are available to hotels in Cape Town, has shown that there are options available to the hoteliers. The researcher finds that there seems to be slow implementation and use of the recommendations available as indicated by the responses of the questions related to this objective.

4.2.3 Determine whether selected hotels in Cape Town conform to international water management practices.

International water management practices reported on in the study highlighted international organisations such as IHEI, Green Globe and the Green Trust. These organisations have links with the hospitality industry and the results of question 24 indicated the partnerships that exist between selected Cape Town hotels and these organisations.

Environmental issues from a global perspective have provided countries with guidelines and policies that should be used to address the environmental concerns. The World Water Council in its documentation of global conferences has put efficiency in water use on the global agenda (World Water Council:2009b).

This objective of the study, to determine whether selected hotels in Cape Town conform to international water management practices, has been shown to be correct. The level of conformity is not in the scope of the study but as discussed in the previous section. 4.2.3, hoteliers are moving in the right direction.

4.2.4 Determine whether guests are sensitive to the water management practices applied in selected Cape Town hotels.

The study shows, Table 3.30, that 50% of the guests that completed the guest questionnaire, (appendix B), were South African. Sixteen percent (16.7%) were from Europe and seven percent (7.7%) represented Africa, excluding South Africa. Further demographic information that was obtained illustrated the majority of those that responded to the questionnaire were in the age group 31 – 40 years. The age group with the least respondents was the under 20 age group as reflected in Table 3.31.

Table 3.32 shows that 87.2% of those guests that responded preferred to stay in a hotel that was environmentally friendly. Table 3.38 shows that there is not a correlation between age and the importance of staying in a hotel that is perceived as being environmentally friendly. The researcher therefore concludes that age has no relevance to the guest's attitude toward environment issues.

The awareness of water restrictions in Cape Town does not seem to be known by a large percentage of guests at Cape Town hotels with only 47.4% (Table 3.33) indicating they are aware of this.

Table 3.34 shows that 91% of guests believe that a guest at a hotel should participate in water saving. This reinforces the 87.2% that prefer to stay in a hotel that they perceive as being environmentally friendly. The high positive response to these aspects indicates the perception of the guest with regard to water saving.

Table 3.35 shows that of the guests that responded to the questionnaire, 78.2% perceived that the hotel they were staying in was an environmentally friendly hotel. The results of the correlation between Table 3.32 and Table 3.35 as presented in Table 3.36 indicate that there is indeed a relationship between the choice of hotel and a guest's preference to stay in a hotel that is environmentally friendly.

Table 3.33 and Table 3.34 respectively indicated the awareness of the guest with regard to water restrictions in Cape Town and the belief that a guest of a hotel should try and save water during their stay in a hotel. These two tables when cross tabulated indicate there is a relationship between these two variables.

The country of origin and the awareness of environmental issues presents itself in Table 3.39 as being of significance. For the purpose of this comparison the country of origin is grouped under two categories,

countries in Africa and countries in the rest of the world. The results indicate that guests that are from countries not on the African continent are more aware of environmental issues and this influences the choice of hotel when travelling.

The researcher found that the 82% of guests that indicated that they would prefer to stay in a hotel that is environmental friendly is not in accordance with the findings of Bohdanowicz (2005:192-193). She found that the concern with the environment ranks fifth in reason for choosing a particular hotel. Bohdanowicz (2005:188) again reports that few hotel guests demand that hotels maintain an environmental program. However, it is found that guests that are aware of environmental issues are seeking to support establishments that have environmental practices in place. The findings for the study may seem to be outside Bohdanowicz's findings due to the limited number of guests that completed questionnaire 2.

The relationship shown between those that are aware of water restrictions and their belief that guests should save water whilst staying in a hotel could be influenced by the high percentage of South African guests 50% and the popular media reports of the need to save water (City of Cape Town, 2004b:1) and (Gosling, 2004:1).

The findings for this objective of the study to determine whether guests are sensitive to water management practices applied in selected Cape Town hotels are shown. However, further research is required in this area with a larger sample of guests before full compliance to this objective can be confirmed.

4.2.5 Develop recommendations for the implementation of water management practices for Cape Town hotels.

The final objective of the study was to put forward recommendations of water management practices that could be used by Cape Town hotel

managers. The results of the questionnaires do indicate that there are hoteliers that are moving in the direction of implementing water management practices. Table 3.4 indicated that 70% of the respondents were of the belief that the organisation for which they work does place a high level of importance on environmental management issues is an indication of this.

The level of awareness may be the result of information about international environmental trends as indicated in the timeline with regard to environmental awareness since 2002 and the World Summit on Sustainable Development that was held in South Africa. This summit may have been the catalyst together with current Cape Town water restrictions that has made the issue of water management a reality within the Cape Town and South African context.

Recommendations for hoteliers in Cape Town to utilise when starting water management initiatives within their hotel are put forward in Chapter 5. These recommendations provide for an eleven step process in creating a water management policy.

4.3 CONCLUSION

The focus of Chapter 4 was the analysis, interpretation and discussion of the data obtained from the study done with the aid of questionnaires aimed at hoteliers and guests in the designated sample.

This chapter discussed the data with relevance to what water management practices are being used by the selected Cape Town hotels. The various water management programs or initiatives that are available to Cape Town hotels were also discussed.

Further discussion examined whether selected Cape Town hotels conform to international water management practices. Guest sensitivity to water management practices through guest perceptions also received attention.

The following chapter, Chapter 5, will focus on the final objective of the study and present recommendations for the implementation of water management practices that could be used by hotels in Cape Town. Components of a water management policy will be identified together with steps that hoteliers can follow when implementing a water management policy with the aim to improve water management practice within their establishment.

CHAPTER 5

RECOMMENDATIONS FOR CAPE TOWN HOTELS TO UTILISE WHEN STARTING WATER MANAGEMENT INITIATIVES WITHIN THEIR HOTEL

5.1 INTRODUCTION

Water management initiatives are but one component of a hotel's overall environmental management program. The study focused on water management and the previous chapters have reviewed the situation in the selected hotels in the Cape Town CBD and Waterfront area.

This chapter provides recommendations that can be used as a guide for hoteliers that wish to implement water management initiatives in order to manage their water usage in the hotel.

5.2 RECOMMENDATIONS FOR THE IMPLEMENTATIONS OF WATER MANAGEMENT INITIATIVES

Green Globe 21 is one of many international environmental organisations that have made recommendations to assist hoteliers when implementing water management initiatives. Using a comprehensive environmental management policy as a guide, the following can be used by local hoteliers wishing to start work in the water management field. (Anon, 2008a:2-3).

5.2.1 Components of a water management policy

A water management policy must:

- Clearly communicate the hotel's commitment to maintaining the environment through sound water management practices.

- Have an action plan to guide the hotel's actions and budget.
- Include the implementation of water management practices that cover all actions relating to the management of water resources, including the awareness and training of staff, incentive programs and guest awareness.
- Have corrective actions or monitoring procedures to ensure that the water management practices meet expectations and allow for corrective action to meet the required level of compliance.

5.2.2 Steps in implementing a water management policy

A water management policy requires a continual review of planning, implementing and improving the processes and actions in order to meet predetermined targets.

The policy should lead to improvement based on:

- **Planning** - identifying water saving aspects and establishing goals.
- **Implementing** - training and operational controls.
- **Checking** - monitoring and corrective action.
- **Reviewing** - progress reviews and making changes to the water management policy if needed.

5.2.3 An 11-step process to create a water management policy

In order for a hotel to develop a water management policy to deal with the water management practices used within their daily operations the following may be used as a guide by a hotelier (Anon, 2008a:3).

Step 1: Education

The hotelier should gather as much information that he/she can with regard to water management practices and initiatives both locally and internationally. This can include resources from organisations such as FEDHASA, Heritage, Green Globe 21 and the ISO 14000 policy.

Step 2: Form a team

Select an interested and committed employee from each department in the hotel to be part of the water management team.

Step 3: Develop and write a water management policy for the hotel

The writing of a policy should indicate to all within the hotel the intent of the management and the relevance of water management in each department. The policy should be brief yet comprehensive enough to define the direction the hotel intends taking towards dealing with water management issues.

Step 4: Designate a champion

One person that shows dedication and an interest in water management issues should be tasked with managing the environmental program of the hotel. They should be given the necessary authority together with the responsibility required to make a success of the initiative.

Step 5: Develop a list of water management impacts for each department

Allow each department within the hotel to investigate their working processes with regard to water management. This step allows for the education of the department's employees of the consequences and responsibly of their department.

Step 6: Qualify and quantify as many of the impacts as possible

Describe and measure the impact water management has in the broader environmental debate. A thorough and accurate assessment of the impacts makes it simpler to set targets and goals which subsequently will be measured to determine whether the targets and goals are met.

Step 7: Rank the impacts in order of severity, ease of fixing and cost to repair

Choose various ranking schemes to put the impacts in order of importance. By ranking the impacts the hotel is able to cost the impacts per department and in totality.

Step 8: Determine and define a set of objectives

The water management team needs to set objectives and group them as either short term or long term. The objectives can be per department and/or for the entire hotel. For example, set an objective of a 10% saving in water usage for the entire hotel.

Step 9: Set targets for each objective with clear timelines

Each objective that was set in Step 8 needs to have specific targets defined. The targets need to put forward set dates that will allow for the measurement of results.

Step 10: Define responsibilities for each target

Delineate responsibilities for each of the targets set. By allowing for the responsibilities to be spread through the departments, depending on the targets, a competitive atmosphere will be created and the success of the hotel obtaining its objectives are not focused on a single person.

Step 11: Document objectives, targets and responsibilities

Documentation of the water management teams' initiatives including all aspects mentioned in the steps above will allow for clear timelines being accessible by all. Detailed and thorough documentation will show the benefits and progress of the water management program and allow for evidence when certification by outside organisations becomes relevant and important to the hotel.

5.3 CONCLUSION

Chapter 5 puts forward a recommendation for a step by step process that could be used by hoteliers that are looking for a basic model to follow when implementing water management practices. The model highlights the eleven areas that could be of benefit to hoteliers and employees working on a water management program.

The following chapter, Chapter 6, will put forth the limitations, conclusions and recommendations as determined by the researcher based on the situation analysis and research done as part of the study.

CHAPTER 6

CONCLUSIONS

6.1 INTRODUCTION

Arriving at the end of the study, the significance should be evaluated. This chapter will focus on the importance of the study as well as the implications for the hotel industry. This will illustrate the extent to which the objectives of the study have been achieved. The limitations of the study will be indentified as will possible areas for future study in the area of environmental management that can be beneficial to the hospitality industry and the country.

6.2 IMPORTANCE OF THE STUDY

The South African hospitality industry needs to become more aware of the concept of sustainable tourism and environmental management. This coupled with the water shortage and water restrictions that the City of Cape Town and surrounding areas are experiencing, makes water management practices an important task in the hospitality industry.

Jacobs's (2005:9) reference to the importance of the triple bottom line, measuring performance according to environmental, social and economic practices and achievements, and the hospitality industry's need to be aware of measures to conserve the country's natural resources (Department of Water Affairs and Forestry, 2004:2-3) are aspects that not only effect the hotel's operation but the country.

Water management practices are but one of the areas where the hospitality industry can contribute to the environment and gain financial saving. Bohdanowicz, (2005:191), Chan & Wong, (2006:482) and Mensah,

(2005:6) have found that internationally the benefits of water management practices cannot be seen in isolation and cost savings and customer service need to be seen to benefit from environmental practices implemented.

The recommendation for implementing water management initiatives illustrates what hoteliers can do to ensure water management within their establishment. The recommendations provide for both short-term (the day to day saving mechanism), and long-term (capital expenditure), methods for dealing with the management of water within the hotel environment (Van Niekerk 2004a). The recommendations can be a starting point for the implementation of a sound water management practice that can be of benefit to the hotel's bottom line as well as the environment.

6.3 IMPLICATIONS OF THE STUDY

The study has found that there are hotels in the Cape Town CBD and Waterfront areas that do have water management practices in place. The various environmental programs that are available to the hospitality industry have been a guiding mechanism for the industry to take action that allows for water savings in the short term and ultimately for the country in the long term.

The results of the second questionnaire, as limited as it is, finds that guests are aware of environmental issues and the international guest in particular is looking for accommodation establishments within the hospitality sector that takes water management and environmental management seriously.

The importance of environmental management as highlighted at both local and international level is an area that the current generation has to take seriously as the actions or non-action of individuals and companies around

the globe will have serious implications on not only sustainable tourism but the future world for generations to come.

6.4 FURTHER STUDY AREAS

The study has focused on only one aspect of the global term of environmental management. As early as 1992 the concept of environmental management together with the importance of sustainable tourism was raised on the world stage at the United Nation's Rio de Janeiro Earth Summit.

The study has made mention of other areas of environmental management in which hoteliers can play an active part. These areas include waste management, energy management and pollution. Each of these areas can be researched from the perspective of the hospitality industry. There are numerous environmental programs from organisations such as Green Trust, IHEI, and Heritage *etcetera* available for support and the implementation of recommendations similar to those used for the management of water can have a place within the hospitality industry.

6.5 LIMITATIONS OF THE STUDY

The study has presented certain limitations that may have limited the findings. The lack of a pilot study to test the reliability and validity of the questionnaires may have resulted in the high percentage of non response to certain questions. The possible technical nature of certain options with regard to methods used to monitor and control water usage may have been beyond the knowledge of the hotel representatives that completed the questionnaire. The majority of the representatives were front office management that may not have knowledge of technical aspects.

The sample size of the study may not have produced sufficient data to confirm all the areas of the study. However, it should be noted that as the sample was based on the star grading of the South African Tourism Council the full list of hotels graded as per the criteria was used. Not all hotels are graded by the South African Tourism Council which resulted in many hotels being excluded from the study.

A further limitation is the less than 50% response rate. The hotel's representative that was approached by the research to be part of the study did not follow through with regard to the completion of the questionnaire. A possible solution to this for further studies could be a personal interview in which the questions could be addressed.

The unwillingness of those hoteliers that did take part in the study to not permit the guest to complete questionnaire resulted in limitations in obtaining adequate data to get a true reflection of guest perceptions, attitudes and knowledge regarding water management and environmental issues.

6.6 OUTCOMES, RESULTS AND CONTRIBUTIONS OF THE RESEARCH

Data obtained from the questionnaire gives an indication as to what selected Cape Town hotels are doing with regard to water management within their establishments. Data pertaining to the awareness of water management practices and the need for water management has also been identified. Overall the study finds that there is an indication that the Cape Town hoteliers are aware of water management and are not ignoring the importance of having water saving measures implemented within their properties.

Hotel guest participation was regrettably limited due to hoteliers not willing to distribute the questionnaire to their guests. The willingness to complete questionnaire 1 was apparent but not all the hoteliers that did complete questionnaire 1 gave their guests questionnaire 2 to complete. The results obtained from those guests that did complete the questionnaire to determine their perceptions with regard to selecting accommodation that have practice water management practices is in line with study findings that guests do feel that water saving by hotels and guests is an important aspect. The international guest tends to be more aware and willing to save water whilst staying in a hotel and their preference of choice of hotel is influenced by the hotel's environmental practices.

The study has put forward recommendations for hotels in Cape Town to utilise when starting water management initiatives within their hotel. This will be able to provide the hotelier with a starting point from which to develop water management practices for short-term, the day to day saving mechanism and long-term, capital expenditure saving.

The study also serves to inform the hospitality industry in the Cape Town area, what support and assistance with regard to developing environmental policies and effective water management practices are provided by FEDHASA and its associates. As highlighted in the study there are a number of local and international environmental organisations that can assist to ensure best practises are implemented.

6.7 CONCLUSION

The study has covered all the objectives of the study and indicates a positive stance towards water management practices at selected Cape Town Hotels. Hoteliers are participants in water management practices and guest awareness of water management is also a positive finding.

If all hoteliers take up the challenge of implementing water management practices the hospitality industry will become part of the global tendency to take on environmental management to the benefit of all globally.

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APPENDIX A: INTRODUCTION LETTER

CAPE PENINSULA UNIVERSITY OF TECHNOLOGY

FACULTY OF BUSINESS

WATER MANAGEMENT PRACTICES

June/July 2007

Dear Respondent,

The Faculty of Business of the Cape Peninsula University of Technology and more specifically the Cape Town Hotel School is undertaking this research. We will be conducting this survey amongst 3, 4 and 5 star graded hotels in the greater Cape Town area and Waterfront.

This survey will establish the knowledge, attitudes and practices of management with regard to water management practices in selected Cape Town hotels. Your input will be vital to equip hoteliers to more effectively manage water saving practices.

The information that you give will be treated as confidential and only a summary will be available should you want a copy. We sincerely thank you for your support in completing this questionnaire.

Please circle or make a cross against the most appropriate answer(s) to each question or statement.

Our grateful thanks.

Desré Draper

APPENDIX B: QUESTIONNAIRE 1

SECTION A: DEMOGRAPHICS

1. Which South African Tourism Grading does your hotel have?

3 Star	
4 Star	
5 Star	

2. How many rooms does your hotel have?

< 50 rooms	
51 – 100 rooms	
101 – 150 rooms	
151 – 200 rooms	
201 – 250 rooms	
250 – 300 rooms	
> 301 rooms	

SECTION B: WATER MANAGEMENT PRACTICES

3. The following questions are about your current environmental management status. Circle/cross the one most appropriate answer to each question or statement.

	Low Importance		Medium Importance		High Importance
3.1 How important are environmental management issues in your hotel?	1	2	3	4	5

3.2 Does hotel management believe that operations can be adapted to become more environmentally friendly?

Yes	
No	

3.3 Does hotel management believe that hotel employees can be motivated to support and participate in environmental management practices?

Yes	
No	

4. Does your hotel currently have a policy on its environmental practices?

Yes	
No	

5. If yes, is your policy a ...

Written statement	
Informal policy	

6. Are guests advised of the hotel's environmental policy?

Yes	
No	

7. If yes, how?

Signage	
Information on arrival	
Brochures or pamphlets	

8. Are guests notified of their assistance in water saving through the frequency of towel and linen washing?

Yes	
No	

9. Is staff advised of the hotel's environmental policy?

Yes	
No	

10. If yes, how?

Signage	
Training	
Memos	

11. Do you believe that by being an environment focused hotel you will increase your hotel's overall market share?

Yes	
No	

12. Is water usage monitored and controlled?

Yes	
No	

13. If yes, is it monitored and controlled by ...

Flow meters in each department	
Flow meters on each floor	
Flow meters in each room	
Other	

14. Have measures been taken to reduce consumption? (i.e. the fitting of spray taps, reducing the quantity of water needed for showers and toilets, placing flow-restrictors on taps)

Yes	
No	

15. If yes, which of the following have been implemented?

Fitting of spray taps	
Reducing the quantity of water need for toilet flushing	
Changing the water pressure of showers	
Placing flow restrictors on taps	

16. Are leaks quickly repaired?

Yes	
No	

17. Is recycled or ‘grey’ water used?

Yes	
No	

18. Are water sprinkler systems correctly maintained?

Yes	
No	

19. Are there any water saving systems and procedures used in your hotel?

Yes	
No	

20. If yes, which of the following do you have in place?

Stopcocks	
Department metering	
Pressure reducing values	
Timed irrigation	
Dual-flush toilets	
Low-flush toilets	
Restrictors	

21. Is preventative maintenance performed on taps, pipes and other water equipment?

Yes	
No	

22. What type of toilet flush system is used in your hotel?

One option flush	
Two option flush	

23. What type of garden water system does your hotel have?

Central sprinkler system	
Manual – hose pipe	

24. Is your hotel involved in any partnership with an environmental organisation?

Heritage	
The Natural Step	
Greentrust	
Green Globe	
International Hotels Environmental Initiative	
Other	

25. Has your hotel added, in the last 24 months, any resources to the property that allow for water savings?

Yes	
No	

26. If yes, please provide a brief explanation of the saving systems and procedures. (eg: list any water saving devices or systems in use)

.....

.....

.....

.....

.....

.....

.....

.....

We would once again like to thank you most sincerely for giving us your time to complete this questionnaire. We would like to re-confirm that this information will be treated as confidential and only a summary will be available to you should you want a copy.

The results that are gained from this information will assist in helping the hospitality industry deal with improving management skills and will benefit staff, guests and ourselves.

Thank you

Desré Draper

APPENDIX C: QUESTIONNAIRE 2

CAPE PENINSULA UNIVERSITY OF TECHNOLOGY
FACULTY OF BUSINESS

WATER MANAGEMENT PRACTICES

The Faculty of Management of the Cape Peninsula University of Technology, and more specifically the Cape Town Hotel School is undertaking this research. We will be conducting this survey amongst guests at selected 3, 4 and 5-star graded hotels in the greater Cape Town area and Waterfront.

This survey will establish the knowledge and attitudes of guests staying in this hotel. Your input will be vital to equip hoteliers to understand the significance of environmental management and water management for guests.

1. Where are you from?

Africa	
Asia	
Australia	
Europe	
New Zealand	
North America	
South America	

2. What is your age group?

<20	
21 – 30	
31 – 40	
41 – 50	
51 – 60	
61 - 70	
>70	

3. Would you prefer to stay in an environmental friendly hotel?

Yes	
No	

4. Are you aware of any water restrictions in Cape Town?

Yes	
No	

5. Do you believe a guest should try to save water whilst staying in a hotel?

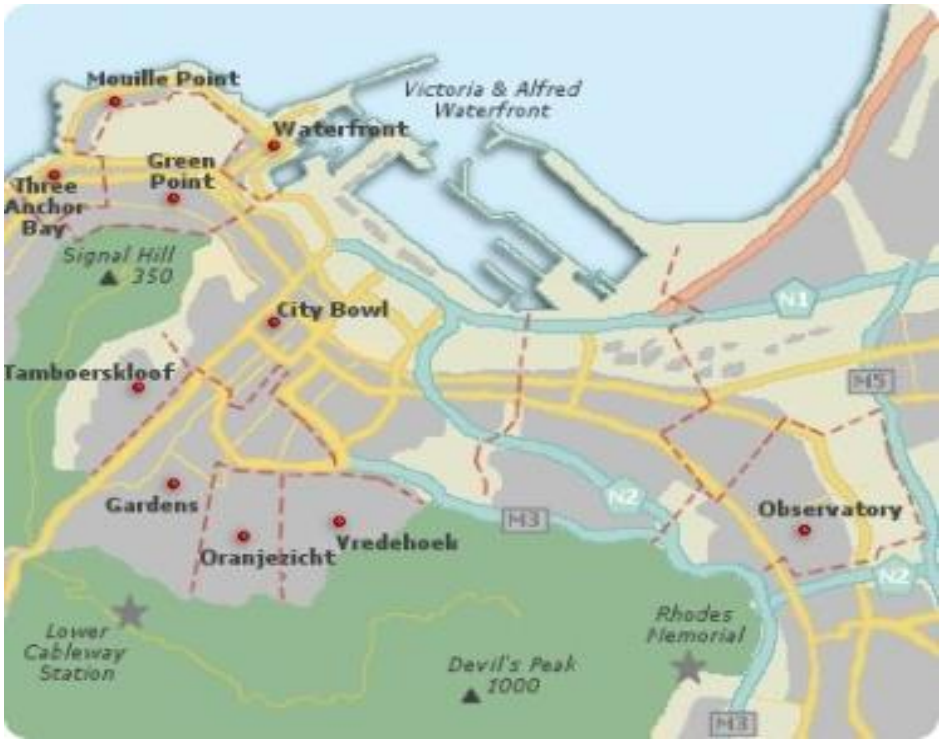
Yes	
No	

6. Do you think that the hotel you are staying at is an environmental friendly hotel?

Yes	
No	

Thank you

APPENDIX D:
MAP OF GEOGRAPHIC AREA WHERE HOTELS THAT TOOK PART IN THE STUDY ARE LOCATED



Map of geographic area where hotels that took part in study are located. (Anon: 2009a)