

**DELEGATE PERCEPTIONS AND RESPONSIBLE  
ENVIRONMENTAL BEHAVIOUR AT THE COP 17 EVENT**

**KOVILEN MOODLEY**  
208524026

Submitted in fulfillment of the academic requirements for the degree of Master of Science in  
Geography and Environmental Management in the school of Agriculture, Earth and  
Environmental Sciences, College of Agriculture, Engineering and Science

**SUPERVISOR: PROF. U BOB**  
**CO-SUPERVISOR: MS. S MUNIEN**

## PREFACE

The work undertaken for this degree was completed at the Westville campus, School of Agriculture, Earth and Environmental Sciences from February 2012 to December 2013. This dissertation was supervised by Prof U Bob and co-supervised by Ms S Munien.

This study represents the original work of the author and has not otherwise been submitted in any form, in part or in whole, for any degree or diploma to any other university. Where use has been made of work by others, this has been duly acknowledged in the text. This dissertation is submitted for the Degree of Master of Science at the University of KwaZulu-Natal, and has not been submitted for a degree or examination at any other university.

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**Kovilen Moodley**

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**Date**

**Supervisor:**

---

**Prof U Bob**

---

**Date**

**Co-supervisor**

---

**Ms S Munien**

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**Date**

# COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE

## DECLARATION 1 - PLAGIARISM

**I, Kovilen Moodley, declare that:**

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3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
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Signed:

\_\_\_\_\_  
Kovilen Moodley

\_\_\_\_\_  
Date

## **DEDICATION**

This work is dedicated to the people who have been impacted by the effects of climate change.

## **ACKNOWLEDGEMENTS**

First and foremost I would like to give thanks to the supreme power for blessing me with the ability to accomplish my endeavours no matter what they may be. The completion of this research project would not have been possible if it had not been for the helpfulness and co-operation of my supervisor Professor Urmilla Bob. I also wish to thank my parents Vadi and Rita Moodley for their constant support and encouragement during this process, this thesis would have not been possible without the both of you being by my side through both through both my good and bad days. Furthermore, my thanks to Ms Suveshnee Munien for her support in the data analysis and interpretation. Also, to Dr Njoya Ngetar, thank you for your assistance on the spatial aspects.

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## Abstract

The attitudes, perceptions and environmentally responsible behaviour of delegates (tourists) at the 17<sup>th</sup> Conference of the Parties (COP 17) to the United Nations Framework Convention on Climate Change (UNFCCC) is an area in which little or no academic research was undertaken from an academic, tourism perspective. This dissertation presents the results of a Green Survey undertaken during this climate change conference, focusing on the attitudes, perceptions and responsible practices of delegates in order to obtain a better understanding of tourism related impacts. Forms of tourism used as the conceptual basis were MICE, event tourism, sustainable tourism and responsible tourism integrated with socio-psychological behavioural theories. COP 17 was held in Durban (KwaZulu-Natal, South Africa) from the 28 November to 8 December, 2011 over 14 days. It was one of the many high-level international meetings on climate change, sustainable development and biodiversity conservation. Delegates involved in the formal discussions included representatives of the world's governments, international organisations and civil society. Several thousand attendees (visitors and local residents) participated in separate discussions and events organised by civil society to highlight environmental and climate injustices and the concerns of the poor. Interviews were conducted at the conference venues, where COP 17 was held, that is, the Inkosi Albert Luthuli International Convention Centre (ICC).

The study endeavoured to understand the socio-economic and demographic profile of delegates. An additional objective was to examine the knowledge, attitudes and perceptions of delegates on various environmental issues related to climate change and its impact on tourism. An attempt was also made to determine whether there were any significant relationships between socio-demographic variables, knowledge and attitudes/ perceptions, and the behaviour of delegates. A structured questionnaire survey of 825 official delegates was undertaken and face-to-face interviews were conducted. The research survey used a non-probability, purposive, spatially-based systematic sampling techniques. The interviews were conducted in the ICC precinct (open spaces) and the first delegate was purposively selected. Subsequently, every fifteenth respondent was interviewed.

The results indicate that despite delegates' awareness of environmental best practices and having a good knowledge of environmental issues, there was inconsistency in behaviour due to a range of factors such as situational, internal and external aspects. Moreover, there was a gap in environmental behaviour practiced at home and whilst travelling. The majority of the delegates agreed that COP 17 had major environmental impacts in terms of energy consumption, air pollution, solid waste and overconsumption of water. Most respondents also stated that they engaged in environmentally responsible practices sometimes or always. It was also found that education had a significant relationship ( $p=0.000$ ) on all environmental best practices whilst age and gender was only related to certain best practices. Additionally, knowledge of a few environment issues was significantly related to certain environmental best practices. Lastly, age was strongly related to the most number of behavioural practices and knowledge had significant relationships to numerous behavioural practices at home and while at the tourist destination. The study shows that socio-demographic variables, such as level of education, were important determinants of COP 17 delegates' attitudes and environmentally friendly practices whilst traveling and at home.

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## **List of Acronyms**

AC- Adverse Consequences

AIDA- Awareness, Information, decision and Action

BRICS- Brazil, Russia, India, China and South Africa

CAR- Central African Republic

CEBA- Community Ecosystem-Based Adaption

CO<sup>2</sup>- Carbon Dioxide

COP- Conference of the Parties

DEAT- Department of Environmental Affairs and Tourism

DRC- Democratic Republic of Congo

EFTA- European Fair Trade Association

ERB- Environmental Responsible Behaviour

FIFA - Fédération Internationale de Football Association

GDP – Gross Domestic Product

GHG- Greenhouse Gas

ICC- International Convention Centre

IFTA- International Federation for Alternative Trade

IIED- International Institute for Environment and Development

IPCC- The Intergovernmental Panel on Climate Change

LED- Light Emitting Diode

MICE- Meetings, Incentives, Conferences and Exhibitions

NEPAD- New Partnership for Africa's Development

PBC- Perceived Behavioural Control

REDD+ - Reduced Emissions from Deforestation and Forest Degradation

SMME- Small, Micro & Medium Enterprise

SPSS- Statistical Package for Social Sciences

SSA- Statistics South Africa

TPB- Theory of Planned Behaviour

TRA- Theory of Reasoned Action

UK- United Kingdom

UN- United Nations

UNEP- United Nations Environment Programme

UNESCO- United Nations Educational Scientific and Cultural Organisation

UNFCCC- United Nations Framework Convention on Climate Change

UNTWO- United Nations World Tourism Organisation

U.S.A – United States of America

VBN- Value-Belief-Norm Theory

WCED- World Commission on Environment and Development

WSSD- World Summit on Sustainable Development

WTO- World Tourism Organisation

# CHAPTER ONE

## INTRODUCTION

### 1.1 Preamble

The subject of this dissertation is geographical in nature as it concerns place, space and environments and geographers have contributed enormously to tourism studies (Hall and Page 2009). The geographic nature of tourism is implicit in the varying definitions of tourism but the common elements are that it is the movement of people from one geographical location to another for the purpose of leisure, recreation or business and their stay in these locations for more than one night (Hall and Page, 2002; World Tourism Organisation - WTO, 2003). However, there is much more to tourism than indicated in the definition, revealing its complexity. Lepp (2008: 9) succinctly expressed this by stating that tourism is a complex system made up of “interdependent and integrated parts” comprising “political, social cultural, historic, ecological and legal variables”. Notwithstanding this complexity, however, it is a major economic contributor. Hernandez and Ryan (2011) confirm this when they state that global economic development received a substantial contribution from tourism, especially in developing countries that rely on tourism as a major source of income. The WTO (2002) is instrumental in promoting tourism as a means for economic development and poverty alleviation.

In the last few decades the voluminous literature on all aspects of tourism indicates that much scholarly attention is being focused on this sector (Benckendorff and Zehre, 2013; Cornelissen, 2005; Sharpley, 2014). There are, however, certain aspects that have been neglected. For example, little research has been undertaken on the impacts of tourist travel behaviour on climate change (Becken, 2007; Hares et al., 2010). Moreover, there is hardly any evidence in the literature that research has been undertaken on the perceptions, attitudes and behaviour of delegates as tourists (tourists labelled *delegates* henceforth) to a climate change conference or similar event, especially in terms of the triple bottom-line impacts (social, economic and environmental), both physical and human. The common person obtains an understanding of climate change and its impacts from sometimes conflicting and unreliable views of the media but the fact that 17<sup>th</sup> Conference of the Parties (COP 17) was an event on climate change leads to one of the

assumptions in this study, as elaborated on later, that delegates have a more detailed understanding of environmental issues generally and climate change considerations more specifically.

Climate change is a threat to humanity and planet Earth and diverse stakeholders from such sectors as government, corporations, academics and research institutions meet frequently to cooperate and find solutions to climate change threats (Bob et al., 2013; UNFCCC, 2011). The 17<sup>th</sup> COP to the United Nations Framework Convention on Climate Change (UNFCCC) served as the meeting of the parties to the Kyoto Protocol and attracted 14 570 registered delegates (UNFCCC, 2011).

The conference was held in Durban (South Africa) from the 28 November to 8 December, 2011 over 14 days. COP 17 was one of the many high-level meetings on climate change, sustainable development and biodiversity conservation. According to Bob et al. (2013), COP 17 served as a platform for discussions to advance the implementation of the Convention and the Kyoto Protocol, as well as the Bali Action Plan and Cancun Agreements. COP meetings generally aim to generate insight into the environmental and socio-economic impacts of climate change and facilitate decision-making processes on the appropriate mitigation and/ or adaptation strategies. Delegates involved in the formal discussions included representatives of the world's governments, international organisations and civil society. Civil society attendees participated in organised events to highlight climate injustices, especially those impacting the environment and poor people (Bob et al., 2013). Since this study is based on the attitudes, perceptions and behaviour of delegates; it is imperative that more insights be provided on the discussions and outcomes at the COP 17 meeting as this may have some influence on the responses of delegates in this investigation.

The COP 16 meeting in Cancun, Mexico reached agreement amongst the parties to foster negotiation through a set of pivotal decisions to prepare the way forward for COP 17 in Durban South Africa (Bob et al., 2013). The COP 17 event was held in Durban/ eThekweni Municipality in the Chief Albert Luthuli International Conference Centre (ICC). Durban has a track record of hosting several major MICE events such as the World Conference against Racism in 2001 and

the 5<sup>th</sup> Brazil, Russia, India, China and South Africa (BRICS) Summit in 2013. Additionally, Durban is one of South Africa's top three tourist destinations and has hosted major tourism events such as 6 of the 2010 Federation Internationale de Football Association (FIFA) World Cup matches. COP 17 led to the drafting of the Durban Platform for Enhanced Action ratified by 190 countries (UNFCCC, 2011a). Basically, this agreement sought to define a global co-operative approach to climate change that went beyond 2020 (Bob et al., 2013). The Durban Platform agreed to at COP 17 is not without its criticisms, especially from civil society organisations (Bond, 2012; Morgan et al., 2011). Morgan et al. (2011), however, are of the opinion that it represents a significant step forward but caution that the output at the meeting are insufficient in ambition, content and timing to deal with the threat of climate change. Given the failure of previous COP meetings and the criticisms of COP 17, it is questionable whether such meetings should continue (Bob et al., 2013; Schipper, 2004). One reason that may be attributed to the failure of COP meetings is the diversity in the composition of delegates leading to numerous and conflicting views on sustainable development due to climate change (Kontinen and Mustalahti, 2012). However, there is some hope as expressed by Achim Steiner, UN Undersecretary-General and United Nations Environment Programme (UNEP) Executive Director. He made the following comments at a press release:

The outcomes of Durban provide a welcome boost for global climate action. They reflect the growing, and in some quarters unexpected, determination of countries to act collectively. This provides a clear signal and predictability to economic planners, businesses and investors about the future of low-carbon economies. A number of specific commitments agreed in Durban also indicate that previous decisions on financing, technology and Reduced Emissions from Deforestation and Forest Degradation (REDD+) are moving to implementation. ...Durban has kept the door open for the world to respond to climate change based on science and common sense rather than political expediency.

Source: Steiner (2011: 1)

The focus of this research is on COP 17 and related events that took place in Durban. Because this is a climate change conference, it is assumed that delegates have more than a media view on climate change and have a better understanding of tourism related issues related to climate change. The responses of delegates, it is assumed, would differ significantly from those of an ordinary tourist. For the common person an understanding of climate change is obtained from the sometimes conflicting and unreliable views of the media (Hares et al., 2010; Schmidt et al.,

2013). For the delegates, however, another assumption was that their attitude, perceptions and behaviour is based on various variables such as education, knowledge and places of origin, as this study outlines. Although some motivation for the present study has been alluded to in the previous discussion a more detailed discussion is undertaken below.

## **1.2 Motivation for the study**

The present study is geographical in nature as it deals with the impacts of event tourism and climate change on space and place. Studies such as the present are rare and to the best of the researcher's knowledge from the literature reviewed, there is little or no research undertaken from an academic perspective on COP events. Additionally, key aspects such as the environmental impacts of the COP 17 event itself and the environmental responsible behaviour of delegates have not been integrated into academic debates, especially from a tourism geographical viewpoint. More importantly, there is very little literature on the environmental impacts of hosting the COP 17 event. The present study addressed the gaps in the tourism geographical literature by focusing on the attitudes, perceptions and responsible environmental behavioural practices of COP 17 delegates to obtain a better understanding of tourism related impacts due to the event. In addressing the issues the current research integrates four forms or aspects of tourism viz. meeting, incentives, conferences and exhibitions (MICE), event tourism and sustainable tourism including such related sub-areas areas as responsible tourism especially the behavioural practices of delegates. What is evident is that the attitudes, behaviour and the ensuing triple bottom-line impacts (social, economic and environmental) seem to be under-researched, especially at events that delegates attend that focus directly on physical and human processes that impact on the environment.

Additionally, areas in which research is urgently needed and in which the current research will focus on include determining the profile of participants, including essential questions such as the socio-demographic and economic characteristics of participants, the place of origin of delegates, their knowledge of COP 17 themes and, most importantly, the behaviour of delegates in relation to environmental issues and sustainable tourism. It is interesting to note that although COP 17 was about climate change due to human impacts on the environment and an attempt to reach some consensus by policy-makers and politicians to decrease environmental impacts, no or little

consideration was taken of the event's own impacts. In the light of the above a Green Survey was conducted among delegates who attended the conference by personnel from the Discipline of Geography, University of KwaZulu-Natal and Tourism KwaZulu-Natal. Part of the data from this larger study, which the researcher was involved in, together with additional secondary data collected by the researcher was used in the present study. A multi-conceptual framework is used to evaluate primary data obtained in this study, drawing from multi-disciplinary sources. The following aim and objectives for this study are tendered below.

### **1.3 Aim and objectives**

The aim of this study was to examine delegate perceptions and responsible environmental behaviour at the COP 17 event. More specifically, the research objectives detailed below were formulated.

- To determine the socio-demographic profile of delegates attending the COP 17 event.
- To determine the choice of accommodation, distance of accommodation from event, environmental best practices and fair trade practices at the accommodation facility used.
- To examine the rating of delegates on their knowledge of COP 17 themes and environmental impacts.
- To examine the engagement of delegates in responsible environmental behaviour and awareness of green initiatives at the COP 17 events.
- To assess the relationship between socio-demographic characteristics, knowledge and the behavioural practices and behaviour of delegates.
- To forward suggestions and recommendations regarding COP 17 as a large-scale tourist event to decrease any negative impacts that such events may have.

### **1.4 Overview of literature review/ conceptual/ theoretical framework**

A multi-conceptual framework will be used to evaluate primary data obtained in this study. It draws from multi-disciplinary sources from such disciplines as geography, environmental sciences, tourism and social psychology to offer a holistic understanding of the attitudes, perceptions and responsible environmental behaviour of delegates at the COP 17 event. A large volume of literature was therefore reviewed and the progression was from a discussion of tourism in general to, more specifically, sustainable development, sustainable tourism, tourism,

responsible tourism, event tourism and climate change, theories of tourist behavioural change and South African tourism more specifically. The socio-psychological theories include such independent variables as environmental education, knowledge of environmental action, components of environmental action, values, situational factors, psychological variables, reasoned action and planned behaviour. This is followed by a discussion of the overall philosophical approach to this study, that is, political ecology.

### **1.5 Research methods and data sources**

The present study was part of a larger Green Survey conducted amongst COP 17 delegates. The researcher was involved in compiling the data gathering instruments, collecting data and inputting of data using Statistical Package for Social Sciences (SPSS) Version 21. The main supervisor of this dissertation was the primary researcher for this broader project.

The case study used was the COP 17 event. These delegates, for the purposes of this study, were regarded as tourists and a sample of official delegates was interviewed and this formed the primary data source. Secondary data was also obtained from previous COP events to enable comparisons. However, most of this data was limited as it did not cover all aspects covered in the present survey. To the best of the researcher knowledge, the research conducted at COP 17 was the first undertaken at a COP event. The research design used a positivistic and phenomenological philosophical approach that was both inductive and deductive combining a survey in relation to a specific case study, conceptual/ theoretical triangulation and a cross-sectional study. The primary data was obtained by means of a questionnaire that comprised many structured questions (Likert rating scales). A few open-ended questions were also included which led to qualitative analysis as well. Personal face-to-face interviews were conducted with delegates who were willing to be interviewed. The empirical data that was obtained from the survey, after being processed using SPSS Version 21, was analysed thematically.

### **1.6 Structure of dissertation**

The study is organised under five chapters. After the introduction (Chapter One), Chapter Two covers the literature on some of the above mentioned themes and a conceptual framework is presented. Chapter Three discusses the methodology that was employed in conducting the study.

Chapter Four focuses on the data analysis and discussion whilst the final chapter, Chapter Five, deals with the conclusion and recommendations of this study.

## **1.7 Conclusion**

The present study takes as its starting point the COP 17 conference on climate change. The delegates to this conference are considered tourists to the city of Durban whilst attending an event. The study was motivated by the fact that not much research has been undertaken on the impacts of COP 17 and its delegates on sustainable tourism and, in particular, responsible tourism. Delegates to such events can make a difference by their actions and behaviour, for example, buying locally produced goods or living in fair trade establishments. The study, therefore, attempts to understand these types of issues as indicated in the aim and objectives outlined in this chapter. To contextualise the study, a brief description of the Durban Metropolitan and the event venue (ICC) was undertaken. An overview of the methodology and data sources, literature review/ conceptual framework and subsequent Chapters were also included to provide some insight on the Chapters that follow. The Chapter that follows will provide a literature review and formulate a conceptual/ theoretical framework for the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

A major academic and socio-economic as well as environmental concern confronting social scientists is climate change and its future impacts (Miller et al., 2010). According to Barr et al. (2011), to combat climate change there is a need for committed behavioural change in a wide range of consumption settings which could be either at home or when on vacation. They consider these settings as spatial and temporal sites of consumer behaviour (Barr et al., 2011). “Accordingly, understanding the ways in which behaviours are undertaken at different sites of consumption in time and space and the relationships that may (or may not) exist between these settings is crucial to appreciating the likely success of behaviour change policies focused on reducing carbon emissions to combat climate change” (Barr et al., 2011: 1234). Given this challenge of climate change, the contextualisation of the present research on delegates to COP 17 explores diverse literature on sustainable development, sustainable tourism, responsible tourism, pro-environmental behaviour and behavioural theories. A review of this literature is briefly undertaken in this Chapter. Relevant theory and concepts are used to formulate a conceptual framework for this study at the end of this Chapter. A schematic presentation of conceptual issues is given as an indication of the current research and forms the foundation for the empirical analysis and evaluation later in this dissertation.

The chapter attempts to follow a logical sequence and is divided into the following main sub-sections: tourism; sustainable development and sustainable tourism; MICE; tourism and climate change; tourist pro-environmental behaviour; variables influencing pro-environmental behaviour; environmental impacts and greening of events; South African tourism; political ecology; conceptualising the present study and the conclusion.

## 2.2 Tourism

The term tourism can be defined as:

...the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited.

(Becken and Hay, 2007: 10)

Tourism is a complex system made up of “interdependent and integrated parts” comprising “political, social cultural, historic, ecological and legal variables” (Lepp, 2008: 9). Global economic development receives a substantial contribution from tourism, especially in developing countries that rely on tourism as a major source of income (Hernandez and Ryan, 2011). The WTO (2002) promotes tourism as a means for economic development and poverty alleviation. In the last few decades the voluminous literature on all aspects of tourism indicates that much scholarly attention is being focused on this sector (Cornelissen, 2005). Sharpley (2014: 37) states:

...tourism represents one of the world’s largest discretionary transfers of wealth, thereby providing a source of income, foreign exchange, government revenues and employment, business and infrastructural development and, hence, wider economic growth and development in destination areas.

Hall and Page (2005 cited in Jamal and Robinson, 2009: 1) conclude that tourism studies within the social sciences can be traced back to the 1920s in Anglo-America. Mason (2003) states that tourism practices during this earlier period (that is, before 1960) involved a lot of risk as travel was unsafe and moreover very few people travelled because they could not afford travel costs, especially long distance travel. Tourism practices were also mainly restricted in first world countries (Mason, 2003). “Tourism is now a global industry involving hundreds of millions of people in international as well as domestic travel each year” and in 2001 about 10% of the world’s population were involved in travel (Mason, 2003: 3). Blanke and Chiesa (2013: xv) state that the travel and tourism has remained relatively resilient in recent years despite “fragile economic growth, macro-economic tensions, and high unemployment. They argue that the tourism sector has been growing. Due to the increase in tourism, numerous problems have been created in areas such as the environmental, social, cultural, economic and political sectors in

destinations which requires the need for “alternative and more environment and host friendly practices in development, planning and policies” (Saarinen, 2006: 1121).

## **2.3 Sustainable development and sustainable tourism**

### **2.3.1 Sustainable development**

“Sustainable development became a buzzword within the international development community in 1987” (Okech, 2010: 339). This was as a result of the realisation that humans activities caused major environmental changes leading to lifestyle changes that were urgently required (McKercher, 2003). The World Commission on Environment and Development (WCED, 1987: 43) defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Since its inception, social scientists have adopted the above definition in their research but there are some common themes inherent in the definitions. According to social scientists such as Pearce et al. (1989) and Houghton and Hunter (1994), the emerging themes from various definitions, utilise concepts such as equity, environment and futurity to indicate that current actions concerning resource use will impact on future generations. Similar sentiments are echoed by McKercher (2003: 3):

Some of the basic principles identified were intergenerational equity, social justice and poverty alleviation, public participation, environmental protection with economic development and dealing with risk and uncertainty.

Since the 1990s environmental policies around the world have focused on sustainability with the debate on this issue transcending national boundaries (Jabareen, 2008). He further cites the work of Dodds (2000) who was of the opinion that “sustainable development arose as a political statement of an ethical position with practical and theoretical implications” (Jabareen, 2008: 187). The aim of this discourse was to “address global environmental and development problems at their root causes” (Jabareen, 2008: 187).

In 1992, at the Earth Summit’s Agenda 21, a blueprint for sustainable development was formulated. The focus of the blueprint was on environmental issues and the equitable distribution of economic benefits from development (Klein, 2011). Following the Rio Summit, the World Summit on Sustainable Development (WSSD) in Johannesburg (2002) followed which clearly

reflected deep disputes between the northern and southern countries (Jabareen, 2008). A political statement was made by the WSSD at the summit called the ‘Johannesburg Declaration on Sustainable Development’ which dealt with sustainable development but also focused on “poverty eradication, changing consumption and production patterns and managing the natural base for economic and social development rather than purely ecological matters” (Jabareen, 2008: 188). Sustainable tourism followed from the sustainable development approach and some insight into these issues are highlighted.

### 2.3.2 Sustainable tourism

The WTO (1996 cited in UNEP, 2002: 1) defines sustainable tourism as “tourism which leads to management of all resources in such a way that economic, social and aesthetic needs can be filled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems”. Numerous variations to this definition pervade the literature and from a review of some of the literature a synopsis of these definitions are illustrated in Table 2.1 below.

**Table 2.1: Definitions of sustainable tourism**

<b>Author</b>	<b>Definition</b>
David (2011)	Ecologically durable, economically executable and socially and ethically fair to the locals
Butler (999)	Maintaining the viability of an area for an infinite period
Bramwell (1991)	Desires of current tourists should not infringe the satisfaction of future tourists
Inskeep (1991)	Meeting the needs of current tourists whilst considering future generations
May (1991)	Preserving the environment and sustaining the ecosystem
Jacobs (1990)	Future generations should enjoy the same environmental benefits
WCED (1987)	Controlled development to satisfy the desires of tourists

Additionally, in line with the concept of sustainability as discussed above, Akama and Kieti (2007: 735) forward an integrated definition of sustainable tourism:

The concept of sustainable tourism strives to harmonise and reconcile issues of intergenerational equity, and the goals of economic growth, environmental protection and social justice. It recognises fairness between local individuals and groups, and between hosts and guests.

It is evident from the above definitions that the focus of sustainable tourism development should be on the management of tourism in a region in a way that current and future generations could enjoy the environmental, ecological and other benefits. Additionally, local communities should benefit and be part of the management of tourism resources. It is clear that the principles of sustainable tourism follows similar principles to that of sustainable development and this entails meeting the needs of present tourists and host regions whilst future opportunities are safeguarded (Klein, 2011). McKercher (2003: 3) avers that tourism is:

...most ideally suited to adopt sustainability as a guiding philosophy for various reasons including the non-consumption of much additional resources besides transport; community resources, culture and traditions is the core resource base of tourism; it is a limited economic opportunity in rural areas; it is a real opportunity to reduce poverty and create employment, it revitalises culture; it is an economic incentive to conserve natural and cultural assets and it fosters understanding amongst people.

To put into practice the concepts formulated on sustainable tourism, a set of principles were developed and these included economic, ecological, cultural and local sustainability (McKercher, 2003). However, McKercher (2003: 5) concludes that “few if any tourism products are truly sustainable and fewer if any destinations can be called sustainable” due to various issues which fall beyond the control of government officials and the tourism industry. Lepp (2008: 10) echoes similar views on the principles underlying sustainable tourism and states that they “should not be cast in stone” as they vary in different locations because of the complexity of the tourism system. Additionally, Manyara and Jones (2007) conclude that the tourism industry has failed in terms of significant socio-economic development especially at the local level because there is very little or no community involvement. These researchers further contend that such a situation was deemed unsustainable in terms of Agenda 21,

which advocates for the involvement of local communities in the decision-making processes as a means to enhancing sustainable tourism development through participative and collaborative approaches in which local communities define current and future developments priorities.

(Manyara and Jones, 2007: 404)

David (2011) concurs with this argument and states that although there is an increase in literature on tourism management and development and sustainability issues, there is no clear relationship between these issues. There is, however, some consensus on the composition of sustainability that entails social, economic and environmental components. Sustainability can only be achieved when there is a balance amongst these three components (David, 2011). An important issue that needs to be considered in terms of sustainability is the responsible practices of tourists and this entails the behavioural practices of tourists at home and when traveling. From the movement for sustainable tourism emerged the concept and practice of responsible tourism (Klein, 2011) as discussed below.

### **2.3.3 Responsible tourism**

Responsible tourism can be defined as “a way of doing tourism planning, policy and development to ensure that benefits are optimally distributed among impacted populations, governments, tourists and investors” (Harrison and Husbands, 1996: 1). Lee et al. (2013) state that inappropriate recreation/ tourism activity and recreational behavior may impact the tourist destination environment directly or indirectly. Responsible tourism practices are utilised as a tool in the tourism industry in order to form a set of principles that promote ecotourism benefits while reducing the negative impacts on the environment. They are commonly associated with the mass tourism sector or market (Harrison and Husbands, 1996). Responsible tourism highlights the fact that ecotourism products can be marketed just as well as any other tourism product so long as an intense level of planning is implemented at a management level. Thus it can be stated that responsible tourism may require more effort in terms of implementation but if management practices are enforced diligently it can be successful (Frey and George, 2010; Harrison and Husbands, 1996).

It is evident that responsible tourism cannot be classified as just another tourism product (Harrison and Husbands, 1996). It is more a set of principles that are applied to the tourist market of a destination in order to make the sector more environmentally inclined. The aim of responsible tourism practice mainly refers to the fact that host nations or city's prefer to apply this form of tourism strategy in order to reduce or mitigate the ill effects of the mass tourism sector on the environment (Harrison and Husbands, 1996; Spenceley, 2008). In other words

responsible tourism can be referred to as a mitigation plan to combat environmental degradation thus preserving the natural environment which plays one of the biggest draw cards of tourism (for example, the Kruger National park in South Africa) (Husbands and Husbands, 1996). Moreover, Spenceley (2008) emphasises that responsible tourism seeks to address issues of global warming, social inequality and decreasing natural resources.

According to the strategic framework laid out by the New Partnership for Africa's Development (NEPAD) the following are some of the most important objectives that responsible tourism should adhere to (NEPAD, 2001 cited in Spenceley, 2008: 3):

- Eradicate poverty;
- To place African countries, both individually and collectively, on a path of sustainable growth and development;
- To halt the marginalisation of Africa in the globalisation process and enhance its full and beneficial integration into the global economy; and
- To accelerate the empowerment of women.

According to Klein (2011: 108), “responsible tourism has three broad areas of concern: tourism's impact on the environment, the equitable distribution of economic benefits to all segments of a tourist destination and minimising negative socio-cultural impacts”. The importance of responsible tourism is indicated by the fact that as a side event and preceding the World Summit on Sustainable Development (held in Johannesburg in 2002), the first Responsible Tourism Conference was held in Cape Town (Klein, 2011; The Responsible Tourism Partnership, 2012). The conference was attended by 280 delegates from 20 countries. According to Klein (2011: 107), “the conference shared the same concerns as sustainable tourism (that is, a focus on environmental, economic and socio-cultural impacts), but was grounded in ethics and human rights”. More specifically, numerous characteristics in the broad areas of responsible tourism mentioned above were agreed upon in the definition included in the Cape Town Declaration (2002). These characteristics included the following (The Cape Town Declaration, 2002: 1):

- It minimises negative economic, environmental, and social impacts;
- It generates greater economic benefits for local people and enhances the well-being of host communities, improves working conditions and access to the industry;

- It involves local people in decisions that affect their lives and life chances;
- It makes positive contributions to the conservation of natural and cultural heritage, to the maintenance of the world's diversity;
- It provides more enjoyable experiences for the tourists through more meaningful connections with local people, and a greater understanding of local cultural, social and environmental issues;
- It provides access for physically challenged people; and
- It is culturally sensitive, engenders respect between tourists and hosts, and builds pride and confidence.

Guiding principles were formulated at the conference for economic, social and environmental responsibility. Incentives, regulations and multi-stakeholder strategies were to be used to achieve the guiding principles and there was a commitment by participants that they would work together. One of the conclusions at the conference was that responsible tourism sought to maximise positive impacts and minimise those that are negative (The Responsible Tourism Partnership, 2002).

According to Smith (1990: 480), responsible tourism incorporates all forms of tourism that respects all parties in terms of their natural, built and cultural environments. Hudson and Harrison (1996: 5) add that responsible tourism “can be practiced in ways that minimise and mitigate obvious disbenefits”. In addition to defining responsible tourism, there are various descriptions of a responsible tourist. Swarbrooke (1999) avers that a tourist should have the responsibilities of obeying laws and regulations; not engaging in illegal activities, or offending local cultural norms or beliefs, not harming local physical environments and lessen the use of scarce resources.

Attitudes and behaviour of tourists to an area differ (Spenceley, 2008). If tourists behave responsibly and at the same time protect the environment, this would be an ideal situation and would lead to responsible sustainable tourism (Spenceley, 2008; David, 2011). Weaver (2003) is of the opinion that responsible tourism will in the long-term lead to the sustainable development of tourism. However, there is evidence that sustainable attitudes and behaviour of tourists differ.

This is illustrated by Budeanu (2007) who concluded from a survey conducted that even though tourists may declare positive sustainable attitudes only a minority took action. He cites a proportion of 5% of tourists that took action by purchasing responsible tourism packages, used environmentally friendly transport or purchased locally produced goods (Budeanu, 2007: 499). Moreover, Swartbrooke and Horner (1999) state that few tourists consider environment practice when choosing an airline or boycott hotels that do not undertake recycling. However, some research indicates that tourists do practice responsible behaviour, for example, research undertaken by Tearfund (2001) indicates that over half the tourists interviewed were more likely to book a holiday with a company that had a written code of conduct on good working conditions and protects the environment. In spite of the forgoing, a claim of concern by tourist does not result in actual behaviour (Weeden, 2005).

#### **2.3.4 Tourism and fair trade**

It is clear that tourism in developing countries is increasing with growth rates far exceeding that of developed countries (Cleverdon and Kalisch, 2000). This has led to reinforcing social and economic inequality. The opposing view is that tourist spend benefits the economy and people get wealthy (Cleverdon and Kalisch, 2000). However, social and economic inequalities are caused through such issues as high land, food and fuel prices and commoditisation of culture (Cleverdon and Kalisch, 2000; Patterson, 1992). With transnational companies dominating the tourism industry in developing countries there was a move towards “ethical trading and investment practices, human rights issues, social an environmental accountability of corporation” (Cleverdon and Kalisch, 2000: 172). This has led to the Fair Trade movement in the tourism industry. Two organisations represent the Fair Trade Movement and these are the International Federation for Alternative Trade (IFTA) and the European Fair Trade Association (EFTA). EFTA (1996 cited in Cleverdon and Kalisch, 2000: 173) defined the functions of Fair Trade as:

- supporting efforts of partners in the South who by means of co-operation, production and trade strive for a better standard of living and fairness in the distribution of income and influence; and
- taking initiatives and participating in activities aimed at establishing fair production and trade structures in the South and on the global market.

Most of the commodities that carry the Fair Trade Mark are primary commodities and little is known about Fair Trade in services such as the hospitality industry (Cleverdon and Kalisch, 2000). The tourism product comprises of many different components such as transport and this makes it intangible. It is also invisible as an export item. Fair Trade in tourism is currently not widespread (Cleverdon and Kalisch, 2000). Fair Trade in tourism should not only consider environmental issues but also human rights, distribution of economic benefits and the ownership and control of resources (Cleverdon and Kalisch, 2000). The authors also state that minimum Fair Trade policies should address social and cultural benefits, respect national laws, develop strong structures of consultation, be transparent, have open trading operations, sustain ecology and respect human rights. “The fair trade concept offers a concrete and practical opportunity for business operations in the North and South to make sustainability in tourism a reality, and a way of life” (Cleverdon and Kalisch, 2000: 184).

#### **2.4 Meetings, Incentives, Conferences and Events (MICE)**

Events are an important component of promoting tourism and in South Africa, the Department of Tourism (2011; 2012), underscores the role that events can play to enhance tourism. ‘Events’ refer to a wide variety of occurrences including large-scale international sporting events to small village celebrations and they are generally characterised in relation to their scale, duration and size (Allen et al., 2011). A major sector in relation to event tourism is the meetings, incentives, conventions and exhibitions (MICE) market.

Mistilis and Dwyer (1999: 56) state that “the MICE sector (meetings, incentives, conventions and exhibitions) is one of the fastest growing segments of world tourism”. The MICE tourism industry can be identified as being a multi-faceted industry not only because it consists of various parts such as the above mentioned, but also due to the activities associated with MICE tourism concerning various considerations. These aspects include transportation, including both domestic and international travel, accommodation, catering services, provision of pre and post-conference tour opportunities and social programmes for delegates and participants (Mistilis and Dwyer, 1999). In order for a MICE event to be successful the various factors stated above need to co-ordinate with each other in a manner that is conducive. If one of these factors, take for example that of transportation, does not co-ordinate with that of accommodation, the whole

event would be a disaster. Thus, MICE tourism compared to other tourism sectors requires a significant amount of attention to detail from the part of supervisors or host nations in order to be carried out in a successful manner (Common Wealth of Australia, 1995).

## **2.5 Tourism and climate change**

According to Hernandez and Ryan (2011), there is a complex two-way relationship between climate change and tourism. Climate change is influenced by tourism in sectors such as accommodation and transport (CO<sub>2</sub> emissions) and various other related activities (Hernandez and Ryan, 2011). One of the most energy-intensive industries today is tourism with travel contributing substantially to greenhouse gas (GHG) emissions (Hares et al., 2010). According to the United Nations World Tourism Organisation (UNWTO, 2007 – previously known as WTO) and Hernandez and Ryan (2011: 80), this industry specifically contributes about 5% of carbon emissions globally. Transport contributes about 90% of the industries contribution to climate change with air travel being the dominant contributor of emissions (about 15% of total CO<sub>2</sub> emissions by 2050) (Hares et al., 2010: 466). Hernandez and Ryan (2011: 80) state that “air transport is responsible for between 2.5% and 3.5% of total anthropogenic emissions causing global warming”.

The second relationship between climate change and tourism is the impact of climate change on the attractiveness of destinations and flow of tourists due to the loss or destruction of natural resources such as coastlines and biodiversity (Hernandez and Ryan, 2011). For example, the damage to water supplies by coastal tourism is highlighted by Danielopol et al. (2003). Moreover, Hernandez and Ryan (2011: 81) state:

The effect of the tourism industry on climate change is moderate in comparison with other industrial sectors, actions must be undertaken in order to manage the impacts and to guarantee the sustainability of the tourism activity in the long-term.

According to Hernandez and Ryan (2011), studies focusing on the impact of climate change on tourism conclude that tourists consider climate change in their decisions to travel and tourist flows can be explained by climatic variables. Additionally, both the causes and consequences of this type of research are significant as they have economic impacts in destination areas

(Hernandez and Ryan, 2011). A major challenge confronting social scientists is therefore, climate change and its future impacts (Miller et al., 2010). According to Barr et al. (2011), to combat climate change, there is a need for committed behavioural change in a wide range of consumption settings which could be either at home or when on vacation. They consider these settings as spatial and temporal sites of consumer behaviour (Barr et al., 2011). They express the following view:

Accordingly, understanding the ways in which behaviours are undertaken at different sites of consumption in time and space and the relationships that may (or may not) exist between these settings is crucial to appreciating the likely success of behaviour change policies focused on reducing carbon emissions to combat climate change.

(Barr et al., 2011: 1234)

An important component, when discussing the relationship between tourism and climate change is the responsible behaviour of tourists in time and space. It is, therefore, important to understand tourist behaviour and this is the subject of the following section.

## **2.6 Pro-environmental behaviour**

According to Reid et al. (2010), various conceptual approaches have been developed to frame and predict pro-environmental behaviour based on an individual's attitudes, beliefs and subjective norms. They also make a distinction between general attitudes (for example, attitudes to air quality) and specific pro-environmental attitudes (for example, recycling) and discuss the value added gap. The value added gap is when individuals who hold pro-environmental attitudes do not display these attitudes (Reid et al., 2010). Stern (2000) considers pro-environmental behaviour in terms of its significance and its impacts, directly or indirectly. He states that environmentally significant behaviour is "the extent to which it changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere" (Stern, 2000: 408). It is "behaviour that is undertaken with the intention to change (normally, to benefit) the environment" (Stern, 2000: 408).

### 2.6.1 Environmentally responsible behaviour (ERB)

Numerous definitions of environmentally responsible behaviour (ERB) have been forwarded. In their review of the literature, Lee et al. (2013: 3) cite various definitions and a summary of these definitions are outlined in Table 2.2 below.

**Table 2.2: Summary of definitions of ERB (Lee et al., 2013: 3)**

<b>Author</b>	<b>Definition</b>
Sivek and Hungerford (1990)	Actions by individuals/ groups to remedy environmental problems
Axelrod and Lehman (1993)	Environmental preservation/ conservation actions
Kollmuss and Agyeman (2002)	Actions by individuals to minimise any negative impacts on natural and built environment
Meijers and Stapel (2011)	Individuals who seriously consider future consequences of their actions by behaving sustainably and making sustainable choices

According to Lee et al. (2013), in tourism research, the attitude-behaviour model as a theoretical basis has received a lot of attention. Additionally, they conclude that environmental attitudes are crucial to determine a person's environmental behaviour and especially ERB. A study by Kim et al. (2006) found that more environmentally conscious people were likely to attend a festival if it was focused on environmentally related issues. Therefore, an important component of pro-environmental or environmentally responsible behaviour based on an individual's beliefs is concern for the environment (Lee et al., 2012). Lee et al. (2012) give a good account of this aspect in their article as discussed below.

#### 2.6.1.1 Environmental concerns

Lee et al. (2012) define environmental concerns broadly as referring to a wide range of indicators including beliefs that the environment is under threat, the adverse results of environmental degradation and concerns for the problems caused by humans on the environment. In their literature review on environmental concerns they cite social scientists such as Barr (2007), Fujii (2006), Grunert (1993), Oreg and Katz-Gerro (2006) and Simmons and Wildmar (1990) on environment concerns. They conclude from their review that environmental concerns impact on behavioural practices to alleviate problems in the environment, positively relate to ecologically responsible behaviour, influence individuals to make sacrifices in their habits and are related to

intentions to purchase greener products (Lee et al., 2012). Pro-environmental behavioural intentions are displayed more by those consumers who are more aware (Lee and Mascardo, 2005). However, according to Lee et al. (2012), few individuals are willing to make sacrifices in their lifestyles although they may express environmental concerns.

In their empirical study, Lee et al. (2012) investigated pro-environmental behaviour in terms of relevant behaviour regarding the environment. Some of the behaviours that they focused on were environmental concerns, environmental knowledge, perceived consumer effectiveness and environmental effect. This study attempted to show the interrelationship between the above mentioned variables and preference for products with pro-environmental attributes. The behaviours that they focused on were green purchase, green product use and green product disposal. The results of their study indicate that behaviour that led to conservation measures undertaken that impact on the environment are recycling, using public transport, paying more for ecologically friendly products and purchasing green products (Lee et al., 2012). In summing up their findings they state that there is a direct positive influence on preference behaviour and an indirect positive effect on behaviour regarding green product use and disposal (Lee et al., 2012).

### **2.6.2 Conceptual approaches to pro-environmental behaviour**

According to Hares et al. (2010: 467), there are various theories using “social, and psychological, subjective and objective variables” to understand behavioural change and to model consumer behaviour. These theories, these authors contend, operate at numerous levels such as the individual, interpersonal and community levels with some theories designed specifically to examine pro-environmental behaviour and predict behaviour in the context of climate change. Moreover, they also point out that there is inconsistency between people’s attitudes and behaviour and they refer to this as the “attitude behaviour gap” (Hares et al., 2010: 467). This is especially so in terms of environmental issues which is a significant challenge on the climate change agenda (Hares et al., 2010).

Various theoretical approaches based on different assumptions are used to explain and promote pro-environmental behaviour, for example, the Theory of Planned Behaviour (TPB) (Liebe, 2010). Most of these theories work with the reasoned action assumption. Other theories focus on

automatic behavioural processes such as behavioural restrictions (prices), moral norms and attitudes (Liebe, 2010). Liebe (2010) contends that it is possible to extend, compare and combine different theories but research results from comparative studies will differ from those using individual theories because of the use of different measurement instruments and statistical techniques. Ajzens theory and Value-belief-norm (VBN) theory are discussed next.

### 2.6.2.1 Ajzens theory

One common theory that has been used to predict pro-environmental behaviour is that of Ajzen's (1991) Theory of Reasoned Action (TRA) (Figure 2.1) and a later modification, the TPB (Figure 2.2). This theory has been used in research investigations in its original form and sometimes refined in various disciplines (Reid et al., 2010). Ajzen (1991: 179) stated:

Intentions to perform behaviours of different kinds can be predicted with high accuracy from attitudes towards the behaviour, subjective norms, and perceived behavioural control; and these intentions, together with perceptions of behavioural control, account for considerable variance in actual behaviour. Attitudes, subjective norms and perceived behavioural control are shown to be related to appropriate sets of salient behavioural, normative, and control beliefs about the behaviour, but the exact nature of these relations is still uncertain.

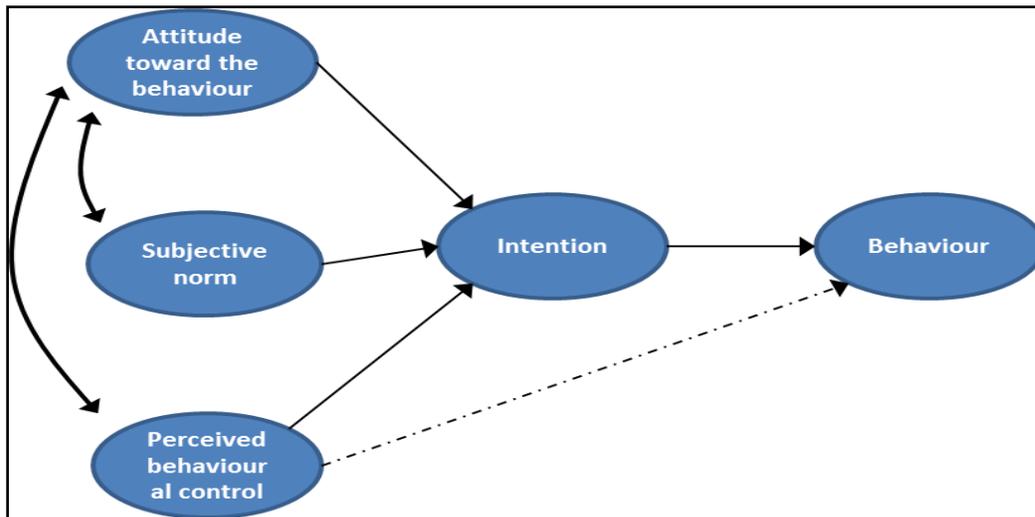
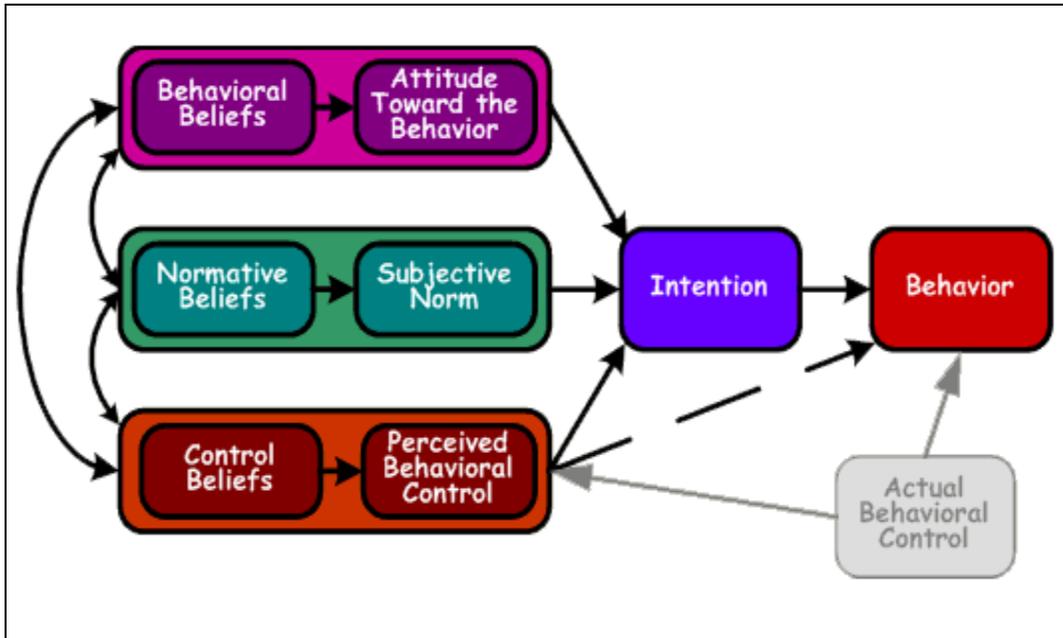


Figure 2.1: Theory of Reasoned Action (Adapted from Ajzen, 1991: 182)



**Figure 2.2: Theory of Planned Behaviour** (Source: Ajzen, 2006: 1)

At this point it is useful to define some of the terminology that is used in the theory and subsequent discussion. These are set out in Table 2.3 below.

**Table 2.3: Definitions of behavioural concepts** (Tsai, 2010: 222)

Concepts	Definition
Behaviour	Action performed at certain time and context with certain purpose
Behavioural intention	Willingness to engage in a certain behaviour (for example, travel)
Behavioural beliefs	Generates attitude towards a behaviour
Normative beliefs	Lead to subjective norms of an individual
Control beliefs	Perceived behavioural control of an individual
Attitude	Likes and dislikes of people, event, objects and the environment
Subjective norm	Motivation to comply with pressure to perform or not to perform
Perceived behavioural control	Beliefs about the factors facilitating or impeding the behaviour and control individuals exert over these

Two factors determine intentions and these are, according to Stanford (2006: 73):

- personal attitudes towards performing the behaviour - the individuals beliefs that a given action will produce positive or negative outcomes.

- subjective norms - this is the individual's perception of the pressure to perform or not certain behaviour received from referents (important referents include specific individuals such as parents, spouse and friends or experts such as doctors).

A third factor was added by Ajzen (1988) and this was perceived behavioural control which entailed perception of the difficulty of performing the behaviour based on past experience and anticipated obstacles. The combination of the three factors modified the TRA and extended it into the Theory of Planned Behaviour (TPB). In discussing the TRB, Luo and Deng (2008) state that individual behaviour is dependent on the intention to perform that behaviour. This is dependent on three factors which are: attitude towards the behaviour, subjective norms by others concerning the behaviour and an individual's perception on whether the behaviour can be performed (Luo and Deng, 2008). In a similar vein, Tsai (2010) avers that attitudes, subjective norms and perceived behavioural control determine behaviour. These factors could be used "to predict the probability of a successful behaviour attempt" (Tsai, 2010: 221).

Studies using TRA try to predict an individual's behaviour to understand behavioural intentions, attitudes to behaviour and subjective norms. It has been found that there seems to be a link between the above mentioned variables in studies conducted (Reid et al., 2010). In discussing the TRA, Reid et al. (2010: 312) state that "an intention to undertake behaviour is the immediate determinant of the behaviour". Liebe (2010: 141) summaries the basic model (TRA) very simply by stating:

In the basic model, the attitude toward the behaviour (for example, taking the bus or car), the subjective norm (normative expectations of reference individuals/ groups), and the perception of behavioural control (potential impediments/ obstacles) determine the behavioural intention, which in turn explains the behaviour (in addition to behavioural control having a direct effect on that behaviour).

Moreover, favourable attitudes and subjective norms strengthen intentions to perform certain behaviour (Reid et al., 2010). Those persons who have positive environmental beliefs or attitudes are more likely to follow environmentally friendly behaviour (Luo and Deng, 2008). However, constraining factors beyond an individual's control (subjective norms in the TRA) may influence behaviour. These constraining factors include a belief by an individual that important others such

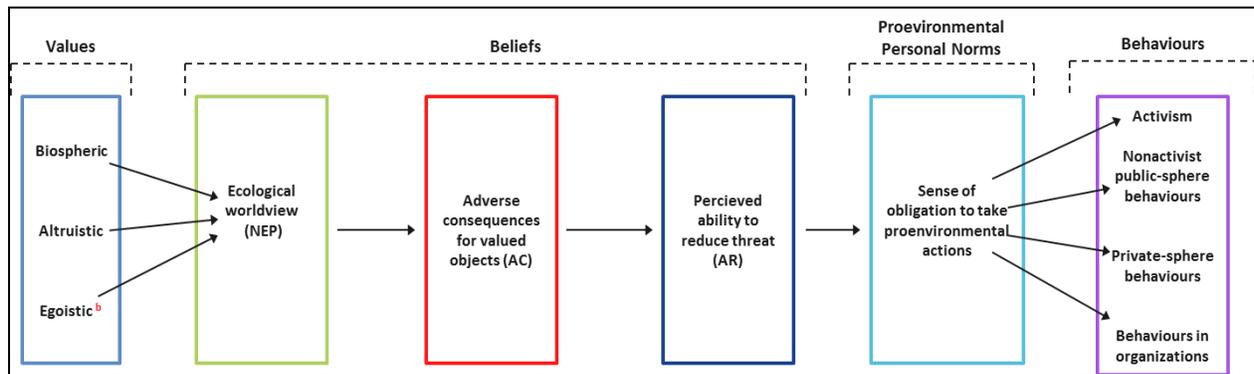
as a friend or family believe that they should perform certain behaviour (Reid et al., 2010). However, they conclude that social and cultural influences are difficult to measure and are weak in predicting behaviour (Reid et al., 2010).

In order to overcome the limitations of the TRA, the TPB (Figure 2.2) was developed by modifying the TRA. This modification accounted for the fact that individuals are emotional beings and not only dependent on rationality (Reid et al., 2010). The constructs added in the TRB are based on underlying beliefs such as an individual complying with other peoples' wishes (Wall et al., 2007). Individual beliefs in the TPB are influenced by behavioural beliefs, normative beliefs and control beliefs (Ajzen, 2001). Reid et al. (2010: 314) contend that perceived behavioural control (PBC) in the theory allowed for prediction of behaviour that "is not under volitional control". Additionally, the PBC makes the difference between the TRA and TRB and moderates the influence of behavioural intentions (Wall et al., 2007).

Studies using TPB show a relationship between behaviour intentions and pro-environmental behaviour. For example, a study conducted by Liebe et al. (2010 cited in Liebe, 2011: 149) in Germany with a sample of 305 people found that individuals were willing to pay (behavioural intention) to protect biodiversity on a regional level. Moreover, "individuals with a high level of consideration of future consequences had a stronger relationship between perceived social consequences and pro-environmental intentions" (Liebe, 2011: 149).

#### **2.6.2.2 Value-belief-norm theory (VBN)**

In the context of behaviour, Stern (2000: 411) defines environmentalism "as the propensity to take actions with pro-environmental intent". By using theoretical accounts from the literature, Stern (2000) and his colleagues developed a value-belief-norm (VBN) theory of environmentalism. This theory links personal values (altruistic), New Environmental Paradigm (NEP) (Ecological worldview), adverse consequences for valued objects (AC) and perceived ability to reduce threats (AR) about conditions in the biophysical environment and personal norms for pro-environmental action (Figure 2.3 below).



Arrows represent postulated direct effects. Direct effects may also be observed on variables more than one level downstream from a causal variable.

b - Empirical measures of egoistic values have been negatively correlated with indicators of environmentalism

**Figure 2.3: A schematic representation of variables in the VBN theory of environmentalism** (adapted from Stern, 2000: 412)

Stern (2000: 413) states:

Each variable in the chain directly affects the next and may also directly affect variables farther down the chain. Personal norms to take pro-environmental action are activated by beliefs that environmental conditions threaten things the individual values (AC) and that the individual can act to reduce the threat (AR). Such norms create a general predisposition that influences all kinds of behaviour taken with pro-environmental intent.

### 2.6.3 Variables influencing pro-environmental behaviour

According to Barr (2003), there has been an increase in the encouragement of citizens to participate in sustaining the environment and engaging in environmental debates after the Rio Earth Summit in 1992. He contends that citizens should obtain factual knowledge that could increase their awareness of savings that can be made by simply switching of lights. However, from a survey of literature that used socio-psychological approaches the conclusions he drew was that “environmental action is influenced by a range of factors” that include education, knowledge, values, situation and psychology (Barr, 2003: 227). Similarly, Mensah (2012) refers to the Tibisi Declaration of 1977 which concluded that environmental education is important to preserve and improve the environment. The goal of environmental education that delegates at the above mentioned conference concluded was to “create new patterns of behaviour of individuals, groups and society as a whole towards the environment” (United Nations Educational, Scientific

and Cultural Organisation - UNESCO, 1978: 26 cited in Mensah, 2012: 69). These aspects will be discussed in more detail below.

### **2.6.3.1 Environmental education**

Environmental education provides knowledge necessary for environmentally responsible behaviour resulting in either sustaining positive or reducing negative environmental behaviour (Mensah, 2012). According to Hungerford and Volk (1990), the sole purpose of environmental education is to shape human behaviour and change the behaviour of individuals by educating them on the environment and the various issues concerning the environment. A contemporary example given by the authors is that of global warming that has impacted on many nations worldwide. Environmental education seeks to provide individuals with educational material (for example, community seminars or courses) on environmental issues to shape their minds to think more environmentally friendly so that they react in an environmentally friendly manner (Hungerford and Volk, 1990). It can be deduced from the above that environmental education is of vital importance for responsible tourism to occur because it provides knowledge that shapes tourist behaviour. If environmental educational structures are not present to impart knowledge in any tourism destination, responsible tourism would not be possible.

Fryxell and Lo (2003 cited in Lee, 2012: 8678) define environmental knowledge as “a general knowledge of facts, concepts and relationships concerning the natural environment and its major ecosystems”. According to Robelia and Murphy (2012), an important factor that governs behaviour is knowledge. In terms of environmental knowledge to promote greener product purchase and usage, Lee et al. (2012) suggest continuous education on environmental awareness issues using innovative strategies. These social scientists cite the findings of Mobley et al. (2010) to justify their conclusions that increased subjective knowledge about the environment is assumed to change environmental attitudes and concerns. Additionally, the direct relationship between pro-environmental behaviour and knowledge was found to exist in early models by De Chano (2006). Pro-environmental behaviour can be predicated by having environmental knowledge because people who have more environmental knowledge are more sympathetic to environmental problems and are more likely to engage in ERB (Mensah, 2012; Thapa et al., 2005; Weaver, 2002). A significant positive relationship does exist between environmental

education and certain ERBs such as buying local souvenirs and reusing towels (Mensah, 2012). This type of positive relationship has, however, not been found in all studies. A weak relationship between environmental knowledge, attitudes and behaviour was found to exist in a study conducted by Kuhlemeier et al. (1999). They conclude that it is the sacrifices made by individuals that have more impact than their attitudes (Kuhlemeier et al., 1999).

### **2.6.3.2 Relationship between knowledge and action**

Barr (2003) undertook a detailed analysis on the relationship between knowledge and environmental action. Research undertaken using this objective model of behavioural change assumes that because people who are ignorant of the facts will not take any action. Areas that are examined are information dissemination using a linear model, the subjectivity of scientific knowledge and the rhetorical situation. There is agreement, however, that behaviour is not only influenced by a linear process of information which determines an individual's action. Geographers and other social scientists have recognised a great range of influences that determines action. The influences that fill this value action gap were termed Awareness, Information, Decision, and Action (AIDA) (Barr, 2003).

The rhetorical situation, according to Barr (2003), is when people rely on knowledge obtained from non-scientific sources and link these to their daily lives. Barr (2003) states that opinions on environmental change using sensory organs are constructed and used in this process, and the rhetorical situation coupled with local embedded environmental discourses and the rejection of objective scientific knowledge may, therefore, have little impact on an individual's behaviour. This is despite global or national information campaigns on environmental conservation (Barr, 2003).

### **2.6.3.3 Components of environmental action**

Environmental action is influenced by many factors such as social values, situational factors and psychological variables (Barr, 2003). Environmental values are the basic criteria that are used by people to justify their actions. Barr (2003: 229) cites the work of Schwartz and Blisky (1987) and Schwartz (1992) who argue that the value continuum of individuals ranges from "egoistic" to "altruistic" and from conservative to "open to change". Environmental behaviour is more likely

to be practiced by those individuals who are altruistic and open to change. According to Barr (2003), there is also a relational continuum that has biocentrism at the one end and anthropocentrism at the other end. With biocentrism nature has intrinsic value according to people's beliefs whilst at the other end of the spectrum anthropocentrism is the dominance of people over nature (Barr, 2003). In this relationship with the environment nature is considered solely for human use and has no intrinsic value. The set of values is belief driven and discusses ecocentrists and technocentrists. The former deals with a working relationship with nature in terms of resolving conflicts between society and nature whilst the latter is based on the argument that because there is a lack of technology this leads to environmental problems. What is needed in this view is technological development to solve environmental problems (Barr, 2003).

Situational factors also impact on environmental behaviour in terms of access to services, socio-demographic variables and knowledge and experience. Pro-environmental behaviour increases with greater access, for example, access to recycling schemes (Barr, 2003; Guagnano et al., 1995). In terms of socio-demographic characteristics, a number of variables such as age and sex influence environmental action, according to Barr (2003), although there have been studies by Hines et al. (1987) and De Oliver (1999) that have contrary findings.

In addition to geographic variables influencing knowledge and environmental action two types of knowledge from a socio-psychological perspective have been identified by Schahn and Holzer (1990) and Barr (2003). These relate to knowledge that is concrete and those that are abstract. Concrete knowledge, according to the above authors, is knowledge related to behaviour that can be used and acted upon. Abstract knowledge is about environmental issues such as environmental problems and their causes (Barr, 2003; Schahn and Holzer, 1990).

Environmental behaviour according to psychological variables is impacted by a person's personality and perceptions (Barr, 2003). According to social scientists such as Barr (2003), Dunlop and Van Liere (1978) and Hopper and Nielsen (1991), benefiting others by one's action without personal benefit determines environmental action and this type of behaviour is termed altruistic. Additionally, Barr (2003: 230) cites the studies of De Young and Kaplan (1986) to illustrate that intrinsic motivation reduced consumption behaviour, for example, individuals who

gained satisfaction from recycling are likely to maintain such behaviour because they obtain a sense of well-being and self-worth. Social pressure and the influence of the behaviour of others also affect environmental action (Barr, 2003). Moreover, behaviour is also impacted on by environmental threats such as global warming which motivates individuals to change their behaviour and take environmental action to try and lessen the problem (Barr, 2003; Segun et al., 1998). Self-efficacy, time and resources have also been found to affect environmental behaviours. In the case of response efficacy Barr (2003) and MacNaghten and Urry (1998) have demonstrated that when individuals have direct influence over an issue they are willing to accept responsibility.

#### **2.6.3.4 Difficulties and complexities in ERB studies**

It is clearly evident that there are difficulties associated with attempting to show the relationship between ERB and knowledge of the environment in empirical studies conducted. From a review of empirical studies on peoples' environmental knowledge and their ERB, Mensah (2012) concludes that there are conflicting findings. For example, the author cites Kollmuss and Agyeman (2002) who found that although knowledge of environmental problems raises concerns for the environment, this was not enough to lead to ERB. The review identified demographic as well as external (institutional, economic, social and cultural) and internal factors (motivation, environmental knowledge, awareness, values, attitudes, emotion, responsibilities and priorities) that shaped ERB (Mensah, 2012). A similar argument is forwarded by Robelia and Murphy (2012) who agree with other researchers such as Bamberg and Moser (2007) that although knowledge is important it cannot alone determine pro-environmental norms and values. They conclude that in addition to knowledge, various other factors should be considered. These factors influencing behaviour, according to Kollmus and Agyeman (2002 cited in Robelia and Murphy, 2012: 300) include the following: “(1) demographic (age, education, gender), (2) external factors (institutional, economic, social, and cultural), (3) internal factors (motivation, environmental knowledge, awareness, values, attitudes, emotion, and locus of control, responsibilities, and priorities)”. In terms of socio-demographic factors influencing behaviour, the findings of Uysal and Jurowski (1994), Formica and Uysal (2002) and Zografos and Allcroff (2007) reveal that demographic variables were not significantly related to environmental behaviour. It is, therefore, evident from the above discussion that the factors influencing environmental behaviour are

complex, context specific and cannot be described in any one model (Robelia and Murphy, 2012).

Mensah (2012) refers to a study conducted by Hanna (1995) who used the TRA in concluding that preceding factors such as past experience and demographic factors interacted with knowledge that individuals possessed. This made their attitudes more favourable and their behaviour more responsible towards the environment (Mensah, 2012). Moreover, another aspect that should be considered is the previous experiences of tourists which led to the accumulation of knowledge that shapes behaviour. This is clearly reflected in the comments made by Oram (1997: 295) that “one of the arguments commonly used to justify nature-based tourism is that through such experiences, tourists adopt more environmentally responsible attitudes and behaviour”. In his paper, Mensah (2012) cites the findings of Hines et al. (1987) who found that intention and a desire to act together with prior knowledge was more likely to lead to environmental action. Tubb (2003) found that environmental education or interpretation positively influenced a tourist’s environmental attitude.

In contrast to the above mentioned conclusions, another point that social scientists discuss in the literature is awareness. For example, Lee and Mascardo (2005) are of the opinion that pro-environmental behavioural intentions are displayed more by those consumers who are more aware. Having information on environmental issues should create awareness of the problem and this should lead to appropriate behavioural change (Miller et al., 2010). However, “information alone does not necessarily lead to increased awareness and increased awareness does not necessarily lead to action” (Jackson, 2004 cited in Miller et al., 2010: 629).

Another important variable that should be considered in influencing behaviour is moral obligation. Research undertaken by Berenguer et al. (2005) show that moral obligation is a strong predictor of environmentally friendly behaviour. Moreover, Dolnicar and Leisch (2008: 384) stated that “moral obligation appears to be the only construct that has been consistently found to be predictive, as opposed to many attitudinal or socio-demographic measures that have led to contradictory findings”. Relationships between socio-demographics and pro-environmental behaviour were inconsistent, for example, tourists with low ecological footprints

are not limited by such variables as age or wealth (Dolnicar and Leisch, 2008). These social scientists comparatively assessed pro-environmental behaviour at home and on vacation. Their assessment revealed that there was more pro-environmental behaviour at home because people feel obligated to behave in this manner at home because the infrastructure differed from that of tourist destinations. They interpreted this finding as being related to higher moral obligation at home and this moral obligation could not be transferred because of the difference in the availability of infrastructure (Dolnicar and Leisch, 2008). There could, however, be a “spill-over” effect – commitment to environment in one setting may lead to a similar commitment elsewhere (Barr et al., 2011: 1235).

## **2.7 Environmental impacts and greening of events**

Frey and George (2010), Han et al. (2011) and Lozano-Oyola et al. (2012) indicate that tourism has the potential to create global environmental effects as a result of increased growth. There are several impacts associated with hosting events which relate mainly to socio-economic and environmental impacts. Economic impacts tend to dominate the literature with an increasing focus on social aspects (Bob and Swart, 2009; Sharpley, 2014; Zhou and Ap, 2009). The authors indicate that the economic aspects relate mainly to return on investment, tourist revenues and destination profiling positive economic spin-offs, job creation, tax burdens, and generally the costs and benefits associated with hosting an event. The social impacts relate to social interaction and feel-good effects, increased entertainment and skills development opportunities, community pride and national building, as well as negative social impacts associated with increased cost of living, disruption of the lives of local residents, overcrowding, increased crime levels, etc. More recently, there has been a growing concern pertaining to the environmental impacts and associated considerations related to the greening of events (Ahmed and Pretorius, 2010; Bob, 2010; Bob and Naidoo, 2012; Janusz and Bajor, 2013; Schmeid et al., 2007). This is the focus of this dissertation.

Davenport and Davenport (2006) indicate that the greatest ecological threat that any form of mass tourism creates is linked to demands on the infrastructure and transport arrangements required to support it, which can result in substantial, often irreversible, environmental degradation. Liu and Diamond (2005) state that the consequences of ecological threats namely

air pollution, disappearance of wetlands, loss of biodiversity, cropland losses, grassland degradation as well as increasing frequency and scale of human-induced natural disasters have been widely recognised. Similarly, Roper (2006) underscores the negative effects of mega-events in particular as changes in land-use and the destruction of the natural environment because of factors like transportation and construction; the consumption of non-renewable resources; emissions to soil, air and water; and the generation of large amounts of waste. These are also relevant to other types of events but on a smaller scale. There is also growing consensus that environmental threats are generally caused by anthropological factors (Department of Environmental Affairs and Tourism - DEAT, 2010). Ahmed and Pretorius (2010) assert that events have the potential to impact negatively on local ecosystems by bringing pollution and waste into some of the world's most biologically and culturally diverse areas; utilising reserves of irreplaceable natural capital; releasing carbon emissions contributing to climate change and the high consumption of energy and water during the event, often causing adverse impacts on the environments and local communities. Additionally, Schmied et al. (2007) argue that discarded rubbish, noise, increased emissions of GHGs and air pollutants from journeys undertaken by visitors as well as the increased consumption of energy and water (especially during the hosting of larger scale and mega-events) have an adverse effect on the environment. These concerns threaten the sustainability of events which Getz (2005) asserts refers to sustainable events that can endure indefinitely without consuming or spoiling any of the resources upon which they depend.

Some of the main drivers of environmental impacts associated with hosting events are therefore (Ahmed and Pretorius, 2010; Bob, 2010; Davenport and Davenport, 2006; Preuss, 2007; Schmeid et al., 2007, Selwyn, 2008):

- Demand on energy and water resources by tourists/ visitors
- Travel patterns (especially in relation to long-haul travel)
- Increased consumptions of goods and services
- Increased waste generation (including carbon emissions)
- Infrastructural development often required to host events

In relation to travel, it is important to note that Buckely (2009) state that tourists tend to mostly utilise motorised means of travel which affect the environmental quality through noise and atmospheric emissions.

Despite the above concerns, there is also increasing recognition that the hosting of events can be platforms for integrating sustainable planning and promoting environmental education (Ahmed and Pretorius, 2010; Beyer, 2006; Bob, 2010; Bob and Naidoo, 2012; Pellegrino and Hancock, 2010; Schmeid et al., 2007). The greening of events in particular entails examining the impacts of the event and planning to limit and mitigate against negative environmental impacts from conceptualisation, implementation and post the event, that is, the entire life cycle of an event. Mol (2010) asserts that since the mid-1900s there is more effort on developing effective structures for environmental protection and conservation in areas such as more efficient use of a country's natural resources, increased environmental investment and staff, more environmental laws and regulations, environmental NGOs and increased eco-labeling. Death (2011) states that there is a growing focus among governments, major event organisers and NGOs on environmental concerns and sustainability issues which are also influencing increased attention to the greening of event. Furthermore, as Han et al. (2009: 1) state, consumers are becoming more environmentally aware and prefer green firms and green products as they seek to "purchase eco-friendly products and services, preferring firms that favor environmental practices".

Cornelissen et al. (2011) emphasise that reducing negative and enhancing positive aspects are central to hosting a successful event which can be realised through an incorporation of greening values and principles. Roper (2006: 2) identifies the basic principles of greening major events as indicated in the Table below.

**Table 2.4: Basic principles of green major events** (Source: Roper, 2006: 2)

<b>Principle</b>	<b>Description</b>
Environmental best practices	Decreasing harmful impacts on the environment by implementing environmentally friendly technology that aims to promote the sustainable use of resources and conserving nature
Social and economic development	Raises public awareness on environmental issues and involves local people in decision-making, create job opportunities and grow the economy
Education and awareness	Correspondence of environmental knowledge and green ideas in an attempt to shift people's attitudes to benefit the environment
Monitoring, evaluation and reporting	Evaluation of the efficiency of these activities before, during and after the mega-event
Leave a positive legacy	Guaranteeing that all short and long-term impacts of any activity that has been undertaken produces significant progress in environmental sustainability

Roper (2006) further states that environmental best practices are the main principles and their implementation decreases harmful impacts on the environment by promoting the use of ecologically friendly technology. Additionally, Allen et al. (2011) assert that events can be used as a platform to demonstrate best practices and change public attitudes and behaviour.

It is important to note that most of the research on the environmental impacts and greening of events (including those cited in this study) focus on large-scale or mega sporting events. However, the issues and principles are applicable to events more generally, including COP events.

## **2.8 South African tourism**

In post-apartheid South Africa tourism is high on the agenda, and it is seen as a catalyst for economic growth to meet the country's developmental objectives through accumulation of foreign currency and foreign and domestic investment (Booyen and Visser, 2010; Cornelissen, 2005; DEAT, 1996). The White Paper on Tourism identifies tourism as an engine of growth in South Africa for numerous reasons and these are briefly mentioned below: it is a significant opportunity for the country; it is the world's largest job generator and can provide immediate employment; it is labour intensive and employs numerous skills; it creates entrepreneurial

opportunities; brings development to rural areas; it is kind to the environment if well managed, it builds cross-cultural relationships; it is a final good, it is a foreign exchange generator, it brings a ready market, it has the potential to influence visitor tastes and create export markets; its demand is continuous; it has a multiplier effect and has potential for linkages. South Africa is a global leader in ecotourism and the tourism potential of the country has not been exploited (DEAT, 1996). Additional reasons cited by Saayman (2003) are that it promotes infra- and supra-structure growth, it accommodates Small, Micro and Medium Enterprises (SMMEs), it accommodates people from all walks of life and it builds national pride. Booyens and Visser (2010) are also of the opinion that the potential benefits of tourism include wealth transfer between rich and poor, no trade barriers to tourism, natural resources that have no alternate uses such as beaches can be used for tourism activities and tourism products and services are provided by industries through backward linkages.

Much effort is therefore being placed on increasing its overall market for international tourism by vigorous promotion (Cornelissen, 2005). This is because South Africa has a phenomenal resource base for tourism with features such as wildlife, scenery wilderness areas, good climate, good infrastructure, special interest activities (for example, deep-sea fishing), and conference and exhibition centres which makes it attractive. The political democratic transformation in the country has also increased its tourism potential domestically and to the global community (DEAT, 1996).

The world's fastest growing industry currently is tourism and it is also the one of the largest industries in South Africa (Saayman, 2003). The UNWTO (2008) forecasted that international travel will increase to 1.6 billion by 2020. From 1994 to 2002 the number of tourist arrivals to South Africa almost doubled from as low as 3 668 958 to a high of 6 429 583 in 2002 which is a good indicator of the importance of tourism to the country (Saayman, 2003: 4-5). According to Cornelissen (2005: 681), between 1995 and 2000, total international arrival to South Africa rose by 22.3% with foreign tourism showing an average year on year growth of roughly 10%. International visitors to the country in 1995 accounted for 4.48 million with the bulk (73%) from the rest of Africa, 15% from Europe and 12% from North and South America, Middle East, Australasia and the Indian Ocean Islands; comprising 1.1 million overseas visitors. Domestic

tourists accounted for 7.9 million (DEAT, 1996: 17). Most overseas tourists came from Western Europe, UK (25%), and Germany (15%). Other countries include USA, Italy, Netherlands and France (Cornelissen, 2005: 681). It is clearly evident from the above data that two main tourism segments comprise the country's international tourist market, Africa and overseas. Because the spending patterns of overseas tourists is higher than that of African tourists, marketing campaigns are targeted at the overseas market (Cornelissen, 2005).

### **2.8.1 Responsible tourism in South Africa**

To achieve the country's tourism potential the White Paper on Tourism proposes responsible tourism as the guiding principle for tourism development. It is a proactive approach to “develop, market and manage the tourism industry in a responsible manner, so as to create a competitive advantage” (DEAT, 1996: 18). According to the White Paper on Tourism (DEAT, 1996), responsibility implies responsibility to the environment; responsibility of government and business; responsibility to respect, invest and develop local cultures; responsibility to visitors in terms of their health, safety and security; responsibility of both employers and employees in the tourism system; and responsibility on the part of the tourist (the latter being the focus of this study).

In terms of the White Paper (DEAT, 1996: 19), the key elements of responsible tourism are:

Avoid waste and over-consumption; use local resources sustainability; maintain and encourage natural, economic, social and cultural diversity; be sensitive to the host community; involve the local community in planning and decision-making; assess environmental, social and economic impacts as a prerequisite to developing tourism; ensure communities are involved in and benefit from tourism; market tourism that is responsible, respecting local, natural and cultural environments and monitor impacts of tourism and ensure open disclosure of information.

Because South Africa has taken the lead in the world with regard to responsible tourism, a responsible tourism conference was held in Cape Town and most of the principles outlined in the White Paper on Tourism (DEAT, 1996) were echoed at the conference as indicated earlier.

DEAT together with the Centre for Responsible Tourism have published a Responsible Tourism Handbook specifically for tour operators (DEAT, 2003). The guidelines provide practical advice and implementation strategies on economic, social and environmental responsibilities (DEAT, 2003).

### **2.8.2 MICE and urban tourism in South Africa**

“In the recent past the country has also sought to secure its tourism industry through the development of new niche markets, the expansion of the Meetings, Incentives, Conferences and Exhibitions (MICE) market, and most noteworthy, by campaigning to host mega-events” (Cornelissen, 2005: 681). South Africa is becoming popular as a MICE destination. In 2006, approximately 3.7 million people visited various events (Global Tourism News and Online Communication, 2012).

The country is actively engaged in the international competition for the holding of prestigious, high-profile sport and other events. More specifically, the metropolitan areas in the country are placing themselves in positions to become globally competitive (Rogerson and Kaplan, 2007 cited in Booyens and Visser, 2010: 368). It is clear from the various conferences and workshops that have been held in South Africa that the promotional focus in urban tourism is to take advantage of the potential for business travel and special interest tourism, hallmark or special events (Rogerson, 2004). Cities in the country have hosted the World Summit on Sustainable Development in 2002 and the UN World Conference Against Racism in 2001 and the prestigious World Economic Forum in 2007 (Cornelissen, 2005; Global Tourism News and Online Communication, 2012) and it successfully won the bid and hosted the 2010 FIFA Football World Cup. However, its bid to host the 2004 Olympic Games and the 2006 FIFA Football World Cup failed (Cornelissen, 2005). Recently, it was awarded the International Rotary Conference in 2019. This event is expected to draw 20 000 delegates. What this demonstrates is the confidence of international associations and buyers of large-scale events in Durban as a destination and the ICC in particular (ICC Durban, 2012).

Rogerson’s (2004) review of scholarly literature on issues in urban tourism found that this area was becoming increasingly recognised in most research since the 1990s. However, despite the

growing interest in such areas as urban regeneration, local economic development and tourism, the field of study is still not fully researched (Rogerson, 2004). The current research on responsible tourism within the context of MICE (that is, COP 17 conference) will in some small way attempt to add to the literature on urban tourism, specifically, event tourism.

## **2.9 Political ecology**

The overarching approach to the present study is political ecology. Within this approach sustainable tourism, events tourism, responsible tourism and the behavioural theories will be used as a basis for analysing and evaluating the empirical data obtained in this study. A brief discussion of political ecology will therefore be undertaken below.

Political ecology does not amount to a new program for intellectual deforestation; rather it is a historical outgrowth of the central questions asked by the social sciences about the relations between human society, viewed in its bio-cultural-political complexity, and a significantly humanised nature. It develops the common ground where various disciplines intersect.

(Greenberg and Park, 1994: 1)

Political ecology is described by Stroup and Finewood (2011: 89) as a “window on the politics of environmental change” aimed at “examining the contextual realities of resource-use decision-making” (King, 2010: 42). The political ecology approach has been applied frequently to assess the condition of “human-environmental actions, especially those associated with economic development in the Third World” (Stonich, 1998: 28). Political ecology is an analytical tool that is a combination of political economy and cultural ecology (Cole, 2012; Robbins, 2004). Gossling (2003) and Cole, (2012) assert that that in this approach, the methods of political economy are applied to ecological contexts. Political ecology forms a link between the state of the environment and the political economy (Adams and Hutton, 2007). This cultural ecological approach has since evolved into the present political ecology approach (Stonich, 1998). The present study considers this an ideal overarching framework that can be utilized to assess the impacts of tourist behaviour and practices on the sustainability of local environments (i.e. eThekweni Municipality). Stonich (1998:28), 16 years ago had a similar view on the usefulness of this approach when he stated that it is a way of understanding how social and environmental changes are understood by the different stakeholders by the interaction of political forces. This

social scientist further contends political ecology helps understand how political and ecological factors interact with each other, from a global level, to examine cause and effect relationships on environment and social change (Stonich, 1998). Some of the most important areas of research using political ecology are conservation, environmental degradation and environmental conflict (Robbins, 2004). In terms of the current research, the first two areas, mentioned above are focused on in the application of the political ecology framework when interpreting and evaluating the results.

## **2.10 Conceptual framework**

The literature review has revealed that the attitudes, perceptions and behaviour of tourist are complex social phenomena, especially when it is studied using different bodies of knowledge. It is, therefore, appropriate at this juncture to understand the basic concepts that comprise a conceptual framework before an attempt is made to formulate the one for this study. There are essentially three concepts that need clarification and these are concepts, frameworks and conceptual framework. Jabareen (2009) provides a good description of the different aspects of a concept. He states that concepts have a history, are defined by its components, have parts from other concepts, relate back to other concepts, is created from something and must be understood in relation to its own components, other concepts, the problem and the plane it is defined on. Eisenhart (1991) states that a framework is to support or enclose research investigations and come in various sizes, shapes, may be implicit or explicit and may fit either tightly or loosely. She distinguishes between three kinds of frameworks, namely, theoretical, practical and conceptual. The first relies on formal theory whilst the practical framework is used by practitioners who reject the theoretical framework and focus on research that attempts to solve practical problems that confront them in their work (Eisenhart, 1991). According to Svinicki (2010), the purpose of a conceptual framework is to understand the causal connections between different components in the research investigation such as concepts, knowledge, ideas or events.

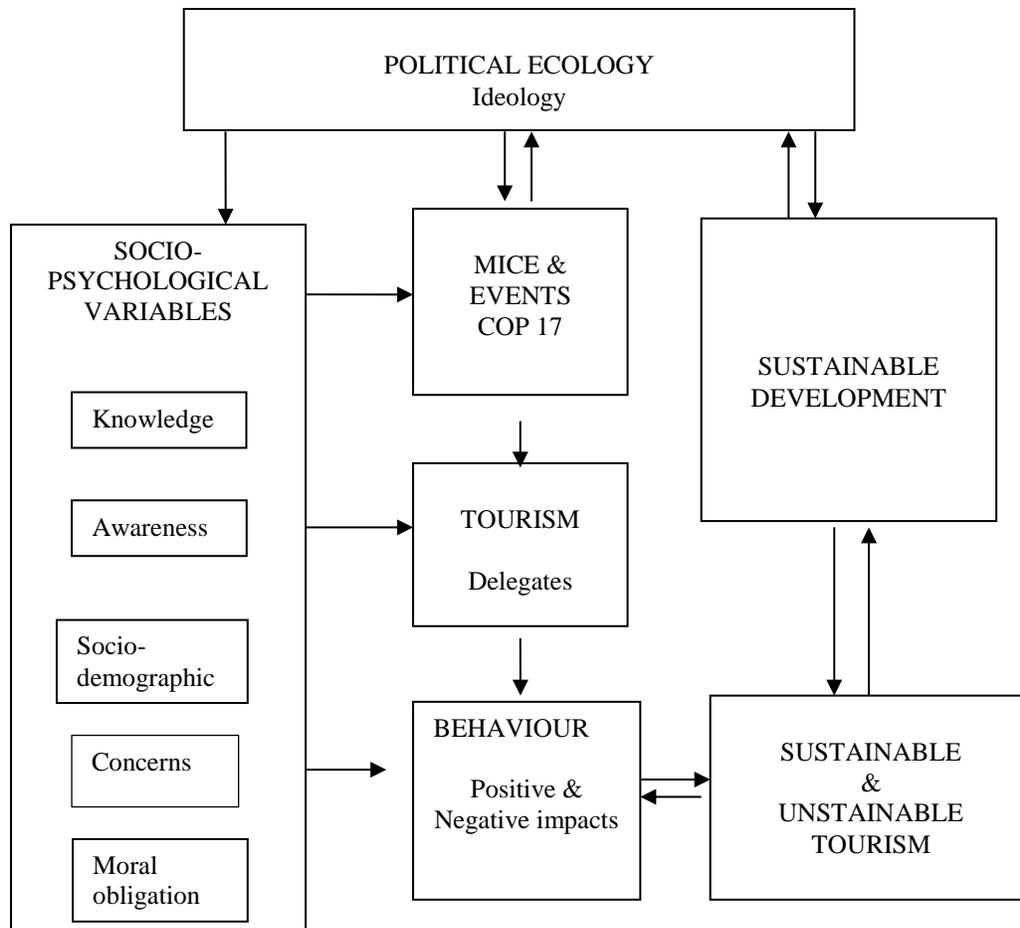
Miles and Huberman (1994) state that it is the main things studied comprising concepts, key factors and the relationship that exist between them. Similar ideas are echoed by Blaxter et al. (1996) and Glatthorn, (1998) who aver that the conceptual framework provides focus and defines the research territory, methods and theories that are applicable and shows their relationships. It

should also be noted that the way in which events are interpreted is influenced by the conceptual framework (Svinicki, 2010). This sentiment is echoed by Leshem and Trafford (2007) in interpreting the work of Robson (1993). These social scientists state that a conceptual framework provides theoretical clarification on the researcher's intentions and it provides clarity to the reader on what and how research is to be achieved (Leshem and Trafford, 2007). Jabareen (2009) also provides a list of the main features of a conceptual framework and echoes similar sentiments as some of the authors mentioned. Jabareen (2009) is of the opinion that a conceptual framework is not merely a collection of concepts but a construct where an integral role is played by concept; it provides an interpretative approach to social reality and it provides understanding. Moreover, it is "an argument that the concepts chosen for investigation or interpretation, and any anticipated relationships among them, will be appropriate and useful, given the research problem under investigation" (Eisenhart, 1991: 209).

### **2.10.1 Conceptualising the present study**

Before discussing the conceptual framework, at this point, the researcher intends to briefly reflect on the problem under investigation as outlined in Chapter One. It is clear from the literature review undertaken that the environmental impacts of the COP 17 have not been integrated into academic debates from the perspective of geography. There is a paucity of literature on the environmental impacts of hosting COP events; especially the attitudes, perceptions and responsible environmental behavioural practices of delegates studied from a tourism perspective within the sustainable development, sustainable tourism, event tourism discourse and political ecology framework. The study attempts to determine whether there are any relationships between socio-demographic variables of delegates, their attitudes and perceptions, knowledge and environmental behavioural practices using a multi-disciplinary perspective. The conceptual framework focuses on the key components in the research design that are investigated (a detailed description of the research design is undertaken in Chapter Three. In attempting to conceptually map and set the boundaries that guide the current study, various themes and concepts identified previously are used (Conkin, 2005; Coughlan et al., 2007; Miles and Huberman, 1994). Burns and Grove (1997) and Coughlan et al. (2007) substantiate this approach by stating that a sound conceptual framework identifies the relationships between various themes and concepts.

The conceptual framework presented graphically (Figure 2.4) takes as its starting point an event (COP 17) that attracted numerous international and local delegates. These delegates are essentially tourists who behave responsibly, that is, pro-environmentally having a positive impact on the environment or engage in irresponsible environmental behaviour having negative impacts. These behaviours are influenced by causal socio-psychological variables such as socio-demographic characteristics, awareness, concerns and moral obligation which may be apparent by the attitudes and perceptions in empirical studies. Behaviour of tourists will influence sustainable tourism, having short and long-term impacts on sustainable development, initially at a micro level but which will eventually compound to be a macro and global problem. Negative or positive environmental impacts through tourist behaviour will eventually influence MICE and future event tourism, either increasing or decreasing it and influencing policy formulation and management strategies for tourism. This will impact on future tourists influencing their socio-psychological composition and future visits to events. The overarching philosophical approach of the study is political ecology. Justification for its use in this research is the fact that it is about understanding and examining cause and effect relationships of human-environmental actions (in this context tourists). The political and ecological factors and their interactions at local and global levels took place at the COP 17 event on climate change. Delegates at these meetings representing governments, civil society and other interested parties made decisions and political statements on sustainable development that have a global impact. The outcomes of these meetings may have an influence on future events and the cycle of tourist behaviour will continue, leaving carbon footprints and various other disastrous environmental impacts. It should be also noted that the framework takes into consideration two-way causal interactions at almost all the stages.



**Figure 2.4: Conceptual framework of study** (Source: Author, 2013)

## 2.11 Conclusion

The task of this chapter was to undertake a rigorous literature review pertaining to the research problem under investigation and to formulate a conceptual framework. Multiple sources of literature from diverse disciplines, using different lenses, were utilised. The literature surveyed tourism, sustainable development, sustainable tourism, responsible tourism, MICE, pro-environmental behaviour and socio-psychological theories. Drawing from the literature reviewed, a conceptual basis for this study was mapped showing the relationships and interconnections. Since there has been hardly any published work on the impacts of COP 17 on the very themes that delegates are seeking solutions, the present conceptualisation within the sustainable development debates, coupled with socio-psychological behavioural theories within a tourism perspective will in some way contribute to the literature and further research by geographers.

## **CHAPTER THREE**

### **BACKGROUND TO STUDY AREA AND METHODOLOGY**

#### **3.1 Introduction**

Given the nature of this research on delegates perceptions and responsible behaviour regarding their environmental practices and initiatives at the COP 17 event, a wide range of methods and techniques have been utilised. In addition to discussing the methods and techniques, the conceptual and theoretical basis of these methods and techniques will also be teased out and concretised in this chapter. Due to the fact that data for this dissertation was obtained from a larger Green study on COP 17, with some modifications to the research instrument, the techniques used to obtain data is similar to that of the main study. However, the research questions that are posed deviate quite substantially from the main study in that it attempts to answer questions from the empirical data obtained in terms of a multi-conceptual theoretical framework spanning the social-psychological, geographical, tourism, environmental and other social science disciplines using triangulation because of its potential. This Chapter begins with an overview of the background to the case study, specifically Durban and the ICC as the host city and venue respectively. Additionally, a brief synopsis of the COP 17 event is provided. This is followed by a discussion of research design with specific emphasis on the philosophical paradigm and approach adopted quantitative and qualitative methodologies, cross-sectional studies, triangulation and case study as a methodological approach. The research questions are then presented followed by the sources of information used. The study population, sampling and questionnaire is described. Data analysis and evaluation is presented followed by a discussion on how ethical issues were addressed.

#### **3.2 Background to case study**

##### **3.2.1 Durban (eThekweni Municipality) and the Durban Chief Albert Luthuli International Conference Centre (ICC)**

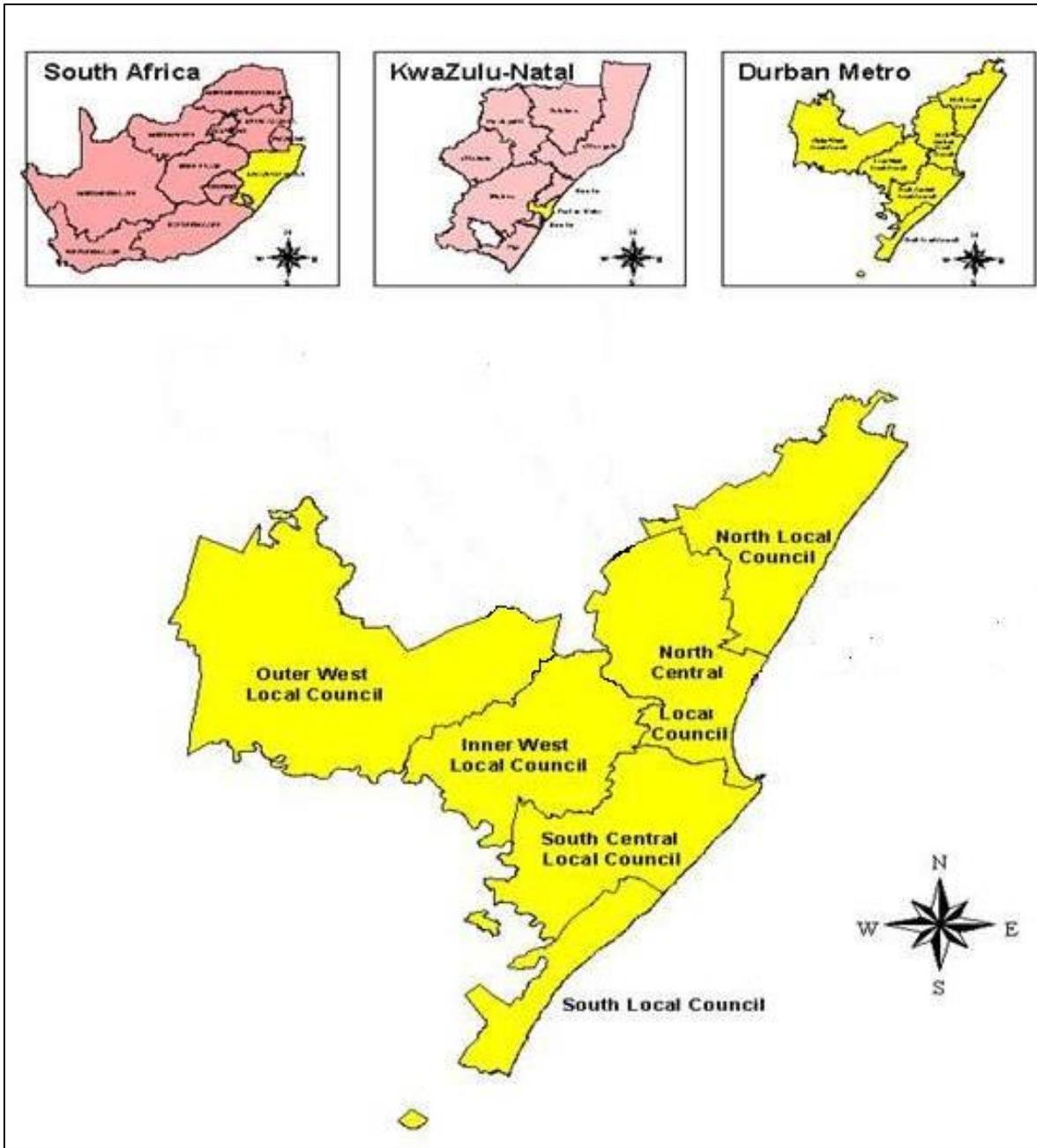
eThekweni (a Zulu word for Durban which means big city) is often used interchangeably with Durban. It is the largest city in the province of KwaZulu-Natal and the third largest city in South Africa. It is located on the east coast of South Africa with an area of 2 297 km<sup>2</sup> (eThekweni

Municipality, 2011). Expansion of the city took place two years after the first democratic elections in the country in 1994 (eThekweni Municipality, 2013). The boundaries of the Municipality were expanded to become the Durban Metropolitan Region or Durban Metro. This expansion included large areas to the north, south and west of the city (eThekweni Municipality, 2011). The city has a cosmopolitan population and a diverse society. The total population of the city is 3 442 361 (eThekweni Municipality, 2011). The climate is warm sub-tropical climate with hot and humid summers (average temperature 28°C) and mild winters (average temperature 23°C) (Local Government Handbook, 2011: 1; KwaZulu-Natal Tourism, 2012).

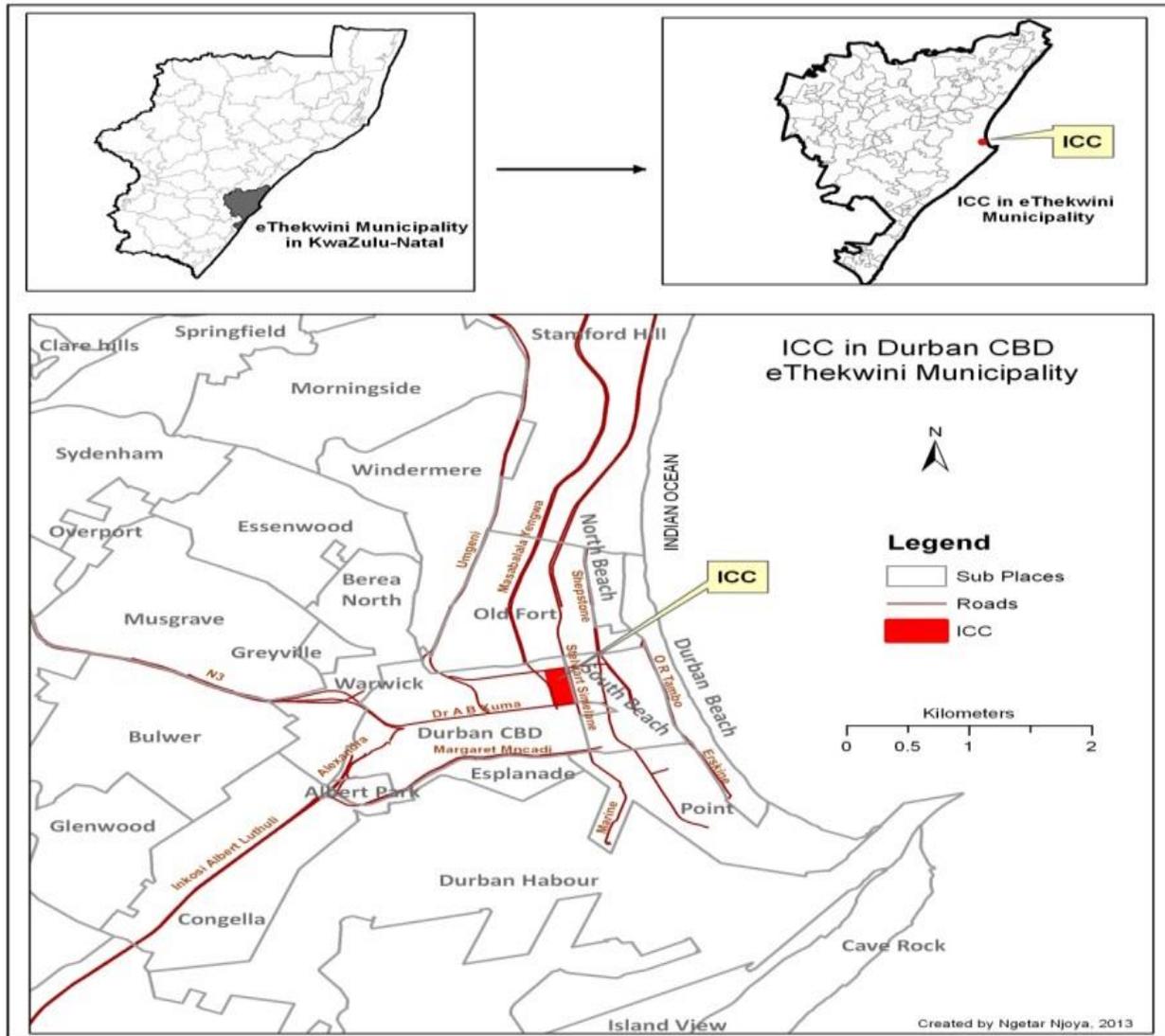
The city's beaches, coupled with the ideal climatic conditions and such attractions as fine hotels, nightspots, shopping malls and ethnic attractions has made eThekweni an ideal tourist destination both nationally and internationally (Local Government Handbook, 2011: 1). A press statement by the KwaZulu-Natal Tourism (2012: 1) describes the city as follows:

Durban is an exciting city in which to play, shop, and experience the nightlife and to relax. The world-class International Convention Centre in Durban has hosted an historic line-up of events including conferences of a global scale. Leisure facilities abound in Durban.

Between 2010 and 2011, the estimated number of tourists that visited the city was 9.95 million (Local Government Handbook, 2011: 1). The value of the economic impact of tourism on the region's Gross Domestic Product (GDP) was 8% annum (eThekweni Municipality, 2011). In terms of MICE and event tourism in the context of the present study, in particular, Figure 3.1 indicates the location of eThekweni in KwaZulu-Natal and South Africa whilst Figure 3.2 indicates the location of the ICC, which was the venue of COP 17. Additionally, a few images of COP 17 at the ICC are given below. The ICC has established Durban as one of the world's best conferencing capitals. It has a world class in-door arena which is able to accommodate 10 000 people (eThekweni Municipality, 2011).



**Figure 3.1: Location of eThekweni ( $29.8667^{\circ}$  S,  $31.0167^{\circ}$  E) in KwaZulu-Natal and South Africa (Source: Author, 2013)**



**Figure 3.2: Location of the ICC (29.853611°S 31.03°E) in the eThekweni Municipality**  
 (Source: Ngetar, 2013)

### 3.2.2 COP 17

The UNFCCC treaty formulated strategies to limit the average rise in global temperatures, the impacts of climate change and to cope with climate change impacts (UNFCCC, 1992). However, emission reduction provisions in the Convention were considered inadequate, thus leading to the Kyoto Protocol in 1997 to strengthen global responses to climate change (UNFCCC, 1998). Since its first inception in 1995, the supreme decision-making body of the Convention which is

the Conference of the Parties (COP) meets annually and comprises of all governments party to the Convention and the Kyoto Protocol (UNFCCC, 1998). Two previous COP meetings, COP 14 and COP 15 failed to reach any agreement ending in a breakdown in negotiations (Cosgrave, 2009; Santarius et al., 2011). The fact that no binding agreements have been reached at previous COP meetings may be attributed to climate change being a complicated phenomenon (Mirza, 2003), being impacted by numerous factors such as poverty, economic development, population growth, sustainable development and resource management (International Panel on Climate Change - IPCC, 2001).

At COP 17, many nations met to discuss a diversity of issues related to the impacts of climate change. These included: sustainable development in a changing climate; climate change financing; governance, planning and policymaking in a changing climate; public engagement in a changing climate; monitoring climate change; disseminating information on changing climate; adapting to climate change; biodiversity conservation and ecosystem health in a changing climate; water resources for human consumption in a changing climate (for example, clean drinking water); reduction of GHG emissions (for example, carbon); renewable/ alternate energy in a changing climate; and climate change, conflict and security (Bob et al., 2013).

There were some gains and some failures at the conferences. The gains at the conferences as reflected in the Durban package, according to Fuhr et al. (2011: iv), are: “a mandate for a legally binding agreement by 2015 and climate financing under the Durban package”. The legally binding agreement was the Durban Platform for Enhanced Action which was a working group that would develop a new protocol that was applicable to all Parties in the UN climate convention. Another key decision at the conference was acceptance of the design recommendations to operationalise the Green Climate Fund (GCF) (Fuhr et al., 2011).

The major failure was that not much progress was made on emission control (Leaders of Religious Institutes in New South Wales, 2012). Further failures of the conference are expressed by Bond (2012) who stated that the negotiations did not address such issues as emission cuts, historic responsibility for carbon emissions, economic development for developing countries and the differences in action in developed and developing countries. Additionally, he that the

conference did not reach any agreement for a global emissions trading scheme (Bond, 2012). Bond (2012) is also critical of civil society because they delegitimised COP 17. According to Fuhr et al. (2011), there was also no commitment by the various nations in terms of resources for the GCF.

### **3.3 Research design**

The meaning of research design differs from study to study. According to Harwell (2011), methodology which includes data collection and analysis is referred to as research design. Other studies consider the entire research process starting from conceptualising the research problem, literature review, research questions, methods and conclusions (Harwell, 2011). Hussey and Hussey (1997) concur with this view by stating that the theoretical background to the study, data collection and analysis in the research process is called the research design. In a similar vein, Cooper and Schindler (2008) state that research design is the blueprint for fulfilling the objectives of a study, collecting and analysing data and answering the research question. The foundation of any research is the questions that are posed and this leads to giving information about the main features of a study which is the design (Harwell, 2011). According to Saunders et al. (2006) research design should help the researcher make informed decisions about choosing a research methodology (data collection and analysis) and the appropriate methods for the research.

Crotty (1998 cited in Harwell, 2011: 148) states that the four features of research design are epistemology informing research, philosophical stance of methodology, methodology and techniques, and procedures in the research design to collect empirical data. Methodology according, to Cooper and Schninder (2002), is the overarching approach to the research. Additionally, the methodology used depends on the choice of paradigm (Hussey and Hussey, 1997). It is important to note that “the methods you use should be extensions of your substantive question and epistemological orientation” (Institute of International Studies, 2001: no page number) as will be discussed later.

An additional component in research design is the literature review which provides a background to understanding the research problem. The conceptual basis of the study derived from the

literature review (discussed in Chapter Two) was instrumental in giving direction to the empirical aspects of this study. As mentioned previously and discussed below, the empirical aspects of this research utilised a case study of COP 17 delegates who were interviewed whilst undertaking a survey. Some of the aspects discussed in the research design above will be the focus of the sections that follow.

### **3.3.1 Philosophical paradigm and approach**

According to Guba and Lincoln (2005), three branches of philosophy, viz. ontology, epistemology and methodology explain the axiom of knowledge. This process is driven by research paradigms (Guba and Lincoln, 2005). A brief description of the concepts is discussed below as they form the basis of any research undertaking.

- Paradigm: “a stable consensus about the aims, shared assumptions and practices of a particular discipline” (Cloke et al., 2005: 606). The term is regularly used in a looser sense to refer to general approaches, theoretical frameworks and methodologies held by groups within disciplines such as geography (Cloke et al., 2005).
- Ontology: is concerned with the realities that are studied by researchers (Mason, 2002).
- Epistemology: is a technical term from philosophy and is the study of knowledge (Cloke et al., 2005). It simply refers “to differing ideas about what it is possible to know about the world and how it is possible to express that knowledge” (Cloke et al., 2005: 606). This knowledge, according to Bryman and Bell (2007) can be obtained through imitation of the principles, procedures and ethos of the natural sciences.

Mason (2002) states that a researcher’s ontological and epistemological position guides the research and the methodology utilised.

In terms of the present research, on COP 17 the perceptions and responsible behaviour of delegates, the following were adopted:

- Positivistic and phenomenological philosophical approach that was both inductive and deductive
- Survey and case study
- Triangulation
- A cross-sectional study

These features will form the basis of this dissertation and will be discussed below.

### 3.3.2 Quantitative and qualitative methodologies

Kohlbacher (2006: 1) avers that “there has been an on-going debate on the appropriateness of different approaches and methods in social research”. In reviewing the body of literature on the qualitative and quantitative debate she concludes that the main dispute stems from the way in which the research methods for each were presented and the completely opposite or contrasting positions of these approaches (Kohlbacher, 2006). Recent trends indicate that there have been some efforts at reconciliation with researchers now exploiting the advantages of both approaches leading to one approach complementing the other and the use of mixed methods in research (Bryman, 2004; Kohlbacher, 2006).

In terms of the underlying philosophical background of these approaches, it is evident that quantitative and qualitative methodologies are related to two principal research paradigms. These are positivism (quantitative) and phenomenology (qualitative) (Mangan et al., 2004). These methodologies, according to Gummesson (2000), comprise of value judgements, norms, ideologies, theories and procedures that are responsible for influencing an individual’s thinking. Mangan et al. (2004: 567 citing Easterby et al., 1991) summarise the key features of positivism and phenomenology with regard to the basic beliefs, researchers’ focus and the preferred methods to be used in a research study. This is indicated in Table 3.1 below.

**Table 3.1: Key features of Positivism and the phenomenological paradigm** (Adapted from Easterby-Smith et al., 1991 cited in Mangan, 2004: 567)

	<b>Positivist</b>	<b>Phenomenological</b>
Basic beliefs	World external and objective Observer independent Science is value free	World socially constructed and subjective Observer part of what is observed Science driven by human interests
Researcher focus	Facts Causality and fundamental laws Reduce phenomena to simplest events Formulate and test hypothesis	Meaning Understand what is happening Totality of each situation Develop ideas from induction from data
Preferred methods	Operationalising concepts so that they can be measured	Using multiple methods to establish different views of the phenomena Small samples – in depth or overtime

According to Denzin and Lincoln (2005: 3), qualitative research is about studying “things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them”. In Harwell’s (2011: 148) view, qualitative research is about trying to understand “the experiences, perspectives and thoughts of participants” using such techniques as case studies and ethnographic work to collect information. The method is inductive in that concepts and explanations are derived from the data obtained and because the biases and perceptions of the researcher are not excluded in the research process, it is a subjective approach (Harwell, 2011).

The hallmark of quantitative research is to be objective and replicate, generalise and predict from research findings using instruments such as surveys and testing (Harwell, 2011). Quantitative research produces objective and unbiased results which are in the form of numbers (Hussey and Hussey, 1997) or the production and analysis of numerical data (Cloke et al. 2005). Primary data is obtained directly from the sampled population and this is used to make inferences to the total population (Manheim and Rich, 1995). Statistical probability tests are used to either accept or reject hypotheses and generalisations are made from the sampled population to the total population (Harwell, 2011). The different methodological steps followed in quantitative research do not differ significantly from the qualitative research methods. The only difference, according to Harwell (2011), is in their purpose and execution.

### **3.3.3 Cross-sectional studies**

According to Bryman and Bell (2007) and Cooper and Schindler (2008), cross-sectional studies are carried out at one point in time with an examination of relationships between variables. In this research, the survey of COP 17 delegates was undertaken during the course of the event for a limited period. The relationships that were investigated are between socio-economic characteristics, perceptions, attitudes and knowledge to environmental responsible behavioural issues in event tourism.

### 3.3.4 Triangulation

Triangulation is the use of different research approaches, methods and techniques. These approaches are used in the same study to overcome potential bias caused by using a single method (Hussey and Hussey, 1997). Mangan et al (2004: 569 citing Easterby-Smith, 1991) describes four types of triangulation that include data triangulation, investigator triangulation, methodological triangulation and triangulation of theories. Table 3.2 below outlines the various types of triangulation. According to this classification, the present research uses triangulation of theories as discussed in the previous Chapter.

**Table 3.2: Different types of triangulation** (Source: Easterby-Smith, 1991 cited in Manson, 2004: 569)

Type	Explanation
Data triangulation	Data collected at different times and different sources
Investigator triangulation	Different investigators independently collect data
Methodological triangulation	Both quantitative and qualitative techniques used
Triangulation of theories	Theory taken from one discipline and used to explain phenomena in another discipline

### 3.3.5 Case study

Any in-depth research on particular phenomena is called a case study (Gomm et al., 2000). According to Zainal (2007), a case study can explain the process and outcome of phenomena. Zainal (2007: 1) goes on to explain:

A case study method enables a researcher to closely examine the data within a specific context. In most cases, a case study method selects a small geographical area or a very limited number of individuals as subjects of study. Case studies, in their true essence, explore and investigate contemporary real-life phenomena through detailed contextual analysis of a limited number of events or conditions, and their relationships.

Moreover, the advantage of case studies is that both quantitative and qualitative methods can be used to analyse data (Stake, 2000; Zainal, 2007). There are also various disadvantages of case studies and these include lack of rigour, little basis for scientific generalisations because of using a single case, long and difficult to conduct and the large volume of documentation (Tellis, 1997; Zainal, 2007).

Another debate regarding the use of a case study regards generalisations that can be made to the total population. In this regard, there are two streams of thought, those who contend that generalisations cannot be made and other who disagree with this view. In the first view, Stake (2000) is of the opinion that a case study cannot be used to generalise. He is supported by Yin (1994) who explains further that it can only be used to generalise to theoretical propositions and to expand theory. A dissenting view on this issue of generalisations using case studies is that of Gomm et al. (2000). These social scientists are of the view that an in-depth case studies can be used to generalise and show the context in which causal processes occur (Gomm et al., 2000). The present study takes the viewpoint that case studies could be used to generalise because the context and causal processes regarding tourism are generally the same.

Researchers differ on the types of case studies. Three examples of these differences are given by McDonough and McDonough (1997), Stake (1995) and Yin (1994). Stake (1995) differentiates between various case study types, namely:

- Intrinsic: carried out to understand a particular case;
- Instrumental: used to obtain insight on a research question by studying a particular case; and
- Collective: an extension of an instrumental study to several cases.

Yin (1994) also classifies case studies into three types which include:

- Exploratory: these are based on asking what questions;
- Descriptive: based on how or why questions and obtaining a background and description of the case being researched; and
- Explanatory: based on what questions.

According to McDonough and McDonough (1997), two types of case studies can be identified, namely:

- Interpretive: interpret data and formulating categories and challenging assumptions about them and
- Adding judgements to phenomena by the researcher.

Based on the classification types discussed above, and since quantitative techniques are used, the present study has elements of an exploratory, descriptive and explanatory case study. It is a single-case design since COP 17 was an event that only occurred once. The case study in this research is a bounded system which in essence means that a researcher focuses attention on a single case and analyses its context without restricting the methodology used and the methods of data collection (Langley and Royer, 2006). These social scientists further state that this broad definition of a case study differs from that proposed by such researchers as Lin (2003) who exclude archival analyses and historical studies because people are excluded. The current research adopts the definition of Langley and Royer (2006: 82) in that the case or entity under study “can be a person, a group, an organisation, a relationship, an event, a process, a problem or any other specific entity”. The COP 17 survey reported in this dissertation includes many of these entities that these authors refer to as indicated in the introductory chapter and further elaborated in the research questions that follow.

### **3.4 Research questions**

The main research questions follow from the objectives outlined in Chapter One:

- What is the socio-demographic characteristic of delegates? Where do they come from? What type of accommodation did they choose? Is the accommodation determined by environmental sustainability principles or was choice restricted? It is important to obtain this baseline data because it is assumed that delegates attitudes, perceptions and behaviour in terms of environmental issues as a tourist will be determined by their socio-economic status (such as age, gender and education) or other variables that had influences.
- What are the attitudes of delegates in terms of accommodation choice, environmental best practices at accommodation, distance from accommodation, and impacts of COP 17 and carbon emissions?
- As a delegate, how do respondents rate their knowledge of selected themes at COP 17 related to tourism and its environmental impacts? This is based on the assumptions that since they have knowledge of issues, this should impact on their environmental responsible behaviour as tourists in some way as compared to ordinary tourists who are not involved in such discussions.

- The most important questions relate to whether delegates actually engage in responsible environmental behaviour whilst at the event. Is there a gap between their attitudes and their behaviour whilst traveling as compared to practices at home?
- Attempts to answer these questions will be based on the empirical data using descriptive and inferential statistics and the conceptual basis of this study, especially the socio-psychological theories of behaviour discussed in the previous Chapter.

### **3.5 Sources of information**

This study used both primary and secondary data sources. Primary data is data gathered specifically for a study through use of a questionnaire and a survey (Zikmund, 2003). Secondary data is data collected from other sources. There are numerous sources of secondary data such as the census and statistical data (Zikmund, 2003). Secondary data for this research was mainly obtained from academic sources (articles, chapters in books, books, etc.), internet sources, previous COP events and other sources including South African Tourism and Statistics South Africa (SSA).

### **3.6 Study population, sampling and questionnaire**

Sampling involves the taking of a small part of a population which is used to make inferences to the whole population (Zikmund, 2003). In this study the population comprised of the delegates that attended COP 17. Two types of sampling techniques can be identified, probability and non-probability. The former, according to Bryman and Bell (2007) and Cooper and Schindler (2008), are samples selected randomly with each unit having an equal chance of being selected without any bias. The opposite is true of a non-probability sample in which some units from the sample population have more likelihood of being selected. The current study used purposive and systematic sampling which, according to Lewis and Thornill (1997), would be ideal to answer the research questions and fulfil the objectives of this study.

There were 14 570 official delegates who attended the COP 17 events. This research was part of a larger study undertaken by the University of KwaZulu-Natal, Discipline of Geography and Tourism KwaZulu-Natal. It should be emphasised that the two main locations were at the ICC precinct where the official event was held and the Howard College campus at the University of

KwaZulu-Natal which was the base for the Civil Society events. All these locations were open spaces and the sampling technique had to conform to this situation. In terms of sampling technique, a three stage sampling procedure was adopted. The first and second stage was during the larger study and the third was for the purposes of this dissertation. Whilst conducting the fieldwork, interviewers purposively selected the first delegate that passed and subsequently selected every 15<sup>th</sup> delegate after the interview was completed on all the event days. Using the procedure mentioned above, interviews were conducted amongst conference attendees based on whether they had official or civil society affiliation. The sample selection was spatially based and had a geographical spread to avoid bias in respondent selection. The target sample size was 1 000 attendees. Of the 1 000, 525 were official delegates and the rest were civil society attendees. The 525 official delegate data is used in this study. The empirical data obtained from this sample was analysed and evaluated in this study.

As mentioned previously, the researcher was part of a team that conducted the fieldwork for the larger study at COP 17 that included both civil society and official delegates. All the fieldworkers were trained at a workshop and problems that were identified with the survey instrument were resolved. Fieldworkers were selected from the University of KwaZulu-Natal (UKZN), Tourism KwaZulu-Natal and Durban Tourism. Fieldworkers were deployed at the ICC precinct and exhibition area and the Howard College campus, UKZN (location of civil society workshops). Fieldworkers used distinctive clothing to identify themselves. After introducing themselves to respondents and explaining the purpose of the survey and obtaining consent from the respondent, the face-to-face interview commenced. The amount of time taken for the interview varied from 20 to 30 minutes and was dependent on the depth of explanation given by the individual respondents.

The data collection method used was a questionnaire. The questionnaire included open and close-ended questions related to the aim, objectives and research questions mentioned in Chapter One. According to Taylor-Powell (1998), open-ended questions stimulate free thought whilst the close-ended questions allow for uniform responses. The questionnaire (Appendix 1) had the following main themes:

- Socio-economic characteristics of respondents;

- Country of origin of international delegate and province of domestic delegates;
- Plans of official delegates to attend civil society events;
- Accommodation type, name of accommodation, number of nights in accommodation;
- Environmental best practices, environmental considerations, fair trade in choice of accommodation and distance of accommodation from activities;
- Main mode of transport to travel from place of accommodation to venue;
- Intention to offset carbon emissions;
- Plan to visit conservation areas while in Durban, KwaZulu- Natal and South Africa;
- Rating of level of knowledge of themes at COP 17;
- Rating of statements on energy consumption, air pollution, solid waste increase, pollution, over-consumption of water, habitat degradation, loss of biodiversity and conservation;
- Awareness of environmental volunteers, green passport, hosting carbon neutral event, climate train, environmental responsible accommodation campaign, green initiatives and recycling; and
- Reduction of consumption, compositing, use of alternate energy, disposal of waste, use of public transport, interacting with locals, using establishments that make use of local products, and purchasing and supporting green products.

### **3.7 Data analysis and evaluation**

SPSS version 21 was used to input the raw data from the questionnaires. Tables and graphs and descriptive and inferential statistics were generated using the above mentioned software. Responses from open-ended questions were coded and grouped into broad thematic areas and analysed accordingly. This process was essential to summarise, describe, analyse and transform the data so that they could be understood. The inferential statistics that were generated were used to make judgements about the population on the basis of the sample (Zikmund, 2003). In terms of the inferential statistic used, these comprised of non-parametric tests including cross-tabulations and Pearson's chi-square tests, in order to determine relationships between independent and dependent variables that were identified. The data was analysed and evaluated in the context of the aim and objectives and conceptual framework proposed for this study.

### **3.8 Ethical issues**

The interviews with the delegates who participated in the survey were voluntary. All the delegates that were approached were willing to be interviewed. The interviewer, firstly, obtained informed consent from the delegates and assured them that the information obtained was strictly confidential and no names or other means of identification would be used in the report or be published in any other form. Once all the above issues were clarified and consent obtained, the interview commenced.

### **3.9 Conclusion**

In any study, research methodology is critical to discuss the linkages between philosophical approaches, methods of data collection and techniques utilized. The linkages that are established will eventually influence the final research outcomes. It is evident from the discussion on research design that the focus in this chapter was not solely on methods and techniques alone. The initial focus in this chapter was on research design because as Nachmias and Nachmias (2008) state, it forms a link between theory that informed research and the empirical data collected. Design aspects, in this study, were therefore, a blueprint. This follows the ideas of Saunders et al. (2006) who consider design as providing guidance for all aspects of research. A cross-sectional case study utilising a structured questionnaire was used to obtain empirical data. Quantitative techniques informed the design of the questionnaire, the analysis and evaluation of data. The chapter also discussed the research questions, the various themes that comprised the questionnaire, data analysis and evaluation and ethical issues. A summary of the research methodology is given in Table 3.3 below.

**Table 3.3: Summary of research methodology**

Research design	Descriptive, interpretive, instrumentalist study
Case study and population surveyed	COP 17 delegates
Philosophical approach	Positivistic and phenomenological
Survey type	Cross-sectional
Study method	Mixed method: qualitative and quantitative inductive and deductive
Sampling techniques	Purposive
Data collection instrument	Structured questionnaire open and closed choice questions
Data collection technique	Face to face interviews Desktop research
Data analysis	Data numerically coded: generated descriptive and inferential statistics
Ethical issues	Voluntary participation Informed consent Anonymity

This chapter has clarified the issues related to the planning and implementation of this research survey. The next chapter focuses on data analysis and discussion of the empirical data obtained during the survey.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND DISCUSSION**

#### **4.1 Introduction**

The present dissertation investigated the attitudes, perceptions and behaviour of delegates to the COP 17 event in the context of the conceptual framework and the literature reviewed. It seeks to understand such variables as the socio-economic and demographic characteristics of delegates as well as their origin, attitudes/ perception, knowledge and environmental responsible behaviour to various issues in terms of tourism impacts. Additionally, the relationship between independent variables such as selected socio-demographic characteristics, knowledge and dependent variables (for example attitudes and behaviour) was undertaken using Pearson's Chi-squared tests. The majority of the interviews were conducted in and around the conference venue, that is, the ICC. The balance of the interviews was undertaken at the UKZN Howard Campus.

It is crucial to understand the behaviour at different consumption sites and the relationships that exist to combat climate change (Barr et al., 2011). The current contribution considers the influence of socio-demographics, attitudes, perceptions and environmental knowledge of COP 17 delegates on their environmental behaviour as tourists. More specifically, the study attempts to understand whether delegates with a high degree of commitment to the environment due to their involvement in the climate policy arena engage in pro-environmental behaviour when they are tourists. The trends and patterns that emerge in the data are related to delegates' awareness and their knowledge of environmental issues and environmental behavioural practices. The results are discussed against the backdrop of the literature reviewed in Chapter Two.

#### **4.2 Socio-economic and demographic characteristics of delegates**

An important component in any research survey is to understand the characteristics of the sampled population. This was especially relevant in this study as socio-demographic variables will be tested against the responsible behavioural practices of delegates later in the analysis and compared to the divergent studies obtained.

#### 4.2.1 Age and gender of respondents

It is evident from Table 4.1 that the majority of delegates were middle aged being in the 35-39 year (34.1%) and 45-49 year (27.6%) age cohorts, comprising 61.7% in total. Those in the younger age cohort (19.6%) and those over 55 years old made up the balance of delegates. The average age was calculated to be 39.6 years, ranging from 20 to 64 years.

**Table 4.1: Age of delegates (n=525)**

<b>Age (years)</b>	<b>Percent</b>
20-24	12.4
25-29	7.2
35-39	34.1
45-49	27.6
55-59	15.2
60-64	3.4

**X=39.6**

There was a predominance of males (65%) in the sampled population with females accounting for only 35% (Table 4.2). Since women are thought to be more concerned about the environment than men (Schultz, 1995) one would expect to have more women at the conference. The smaller number of women could be attributed to the nature of the conference and as will be discussed later, the large majority of respondents from Africa where there is male domination. With regards to studies conducted on the influence of age and gender on environmental behaviour, studies have found different results in terms of their influences on environmental action. For example, Barr (2003) found positive relationships whilst studies by Hines et al. (1987) and De Oliver (1999) had contrary results.

**Table 4.2: Gender of delegates (n=525)**

<b>Gender</b>	<b>Percent</b>
Male	65
Female	35

#### 4.2.2 Education

Education is of vital importance for responsible tourism as knowledge shapes human behaviour, especially environmentally responsible behaviour (Hungerford and Volk, 1990; Mensah, 2012). In the sampled population, there were only a few delegates who had a primary and secondary

education (2.7%) (Table 4.3). Most delegates had post-secondary education, having either certificates/diplomas (8.2%), undergraduate degrees (15.8%) or postgraduate degrees (73.3%) (Table 4.3). The majority of delegates at COP 17 were, therefore, well qualified in terms of educational achievements to make a contribution to the discussions at COP 17. According to a study by Hungerford and Volk (1990), individuals who are environmentally educated will think more environmentally friendly and also react in an environmentally friendly manner. It is therefore expected of delegates to be more environmentally responsible in their behavioural practices as tourists.

**Table 4.3: Highest education level attained by delegates (n=525)**

<b>Education level attained</b>	<b>Percent</b>
Primary	0.2
Secondary	2.5
Certificate/diploma	8.2
Undergraduate degree	15.8
Postgraduate degree	73.3

#### **4.2.3 Income**

Ahmed et al. (2008) assert that the appreciating income differences is crucial in that it can influence general tastes and preferences for environmental attributes, amenities and activities. The net monthly incomes of delegates ranged from less than R10 000 to over R200 000, indicating that there were extremes in relation to income earnings. The majority of delegates (60.7%) earned less than R69 000 per month with almost an even distribution in the income categories from less than R10 000 to R49 000. The average income was calculated to be R50 727. Thirty percent of delegates did not disclose their incomes because they regarded it as confidential (Table 4.4). Income is a significant determinant of environmental behaviour and according to UNEP (2013), tourist from societies with large disposable income and different consumption patterns and lifestyles spend large amounts of money and behave in ways that may impact on destination areas either positively or negatively.

**Table 4.4: Monthly net income of delegates (n=525)**

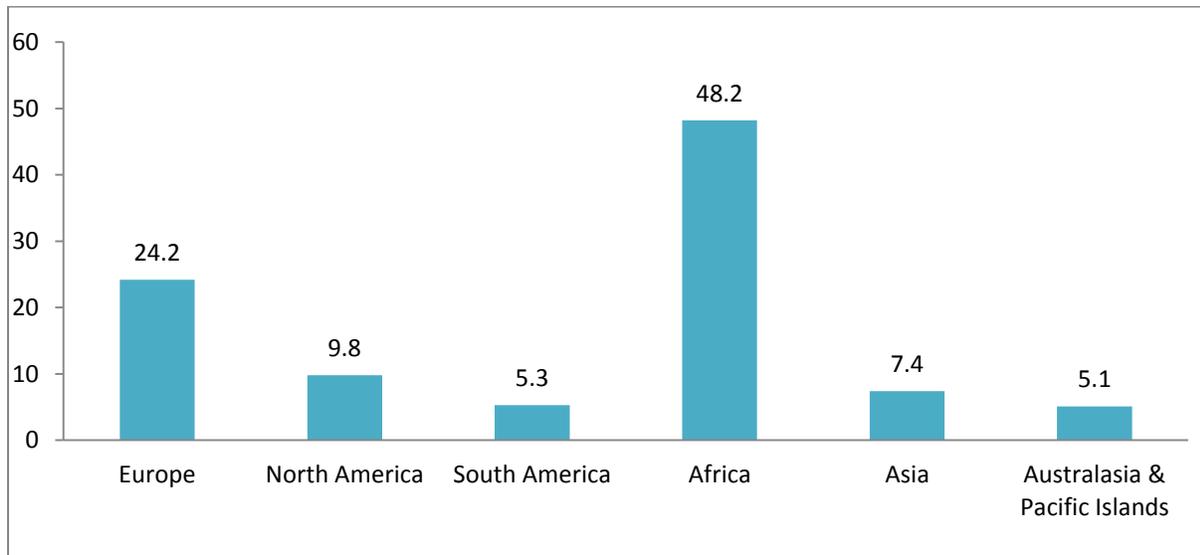
<b>Income categories (R)</b>	<b>Percent</b>
< 10 000	10.1
10 000 - 19 000	12.0
20 000 - 29 000	12.6
30 000 - 39 000	10.4
40 000 - 49 000	9.9
50 000 - 59 000	3.2
60 000 – 69 000	2.5
70 000 - 79 000	0.9
80 000 - 89 000	2.7
90 000 – 99 000	0.8
100 000 - 109 000	1.9
110 000 - 119 000	0.6
120 000 - 129 000	1.3
130 000 – 139 000	0.4
200 000 - 209 000	0.6
Confidential/ cannot disclose	30.0

**X= R50 727**

### **4.3 Origin of delegates**

Foreign delegates comprised a large proportion of the sampled population (67.6%) whilst local participants made up 32.3%. Figure 4.1 and Figure 4.2 illustrate the continent and country of origin of international delegates. The proportion of local delegates attending COP 17 is outlined in Table 4.5.

### 4.3.1 International delegates



**Figure 4.1: Continent of origin of international delegates (n=355) (in %)**

The majority of international delegates came from Africa (48.2%), followed by Europe (24.2%) and North America (9.8%) (Figure 4.1). Smaller numbers came from the other continents. Many of the countries in these continents were represented as indicated in Appendix 2. Countries in Africa that were prominent were Zimbabwe (3.6%), Nigeria (3%), Kenya (3%), Mozambique (2.3%) and an equal number of delegates (1.9%) from Ghana and Uganda (Appendix 2). The reasons for the larger proportion of African delegates at COP 17 could be because of the close proximity of the conference to these countries. Additionally, there is the perception by African countries that they are most affected by climate change and its impacts and delegates could make a difference at the conference by their input and presence. Delegates from western countries (34%) were dominated by the USA (4.6%), UK (2.6%), Sweden (2.5%), Germany (3.4%) and Canada (1.9%) (Appendix 2). In terms of tourist arrivals to South Africa, the proportion of delegates from the different countries are similar to the figures given by Cornelissen (2005) which shows that the majority came from Africa and Western countries.

The obvious reason for the large presence of western delegates is that they are the key decision-makers and influence policy at these gatherings. Another factor that should be considered in

terms of the large number of delegates from developing countries is the development of environmental values as indicated by Inglehart (1995) in his study. The study concluded that pro-environmental values become common in societies that are more developed because focus shifts from meeting basic needs to improving quality of life and this may apply to the delegates from developed countries. However, in terms of African delegates, there is a realisation that climate change will affect their lives by impacting on their quality of lives and it was necessary for them to attend. According to the World Bank (2009), this is due to the increasing climatic disasters such as floods, droughts and cyclones which make Africa very vulnerable and unable to cope. Moreover, since quality of life as Reid et al. (2010) state includes the environment, the participation of such a large number of delegates from developing countries because sustaining the environment is paramount for the survival of future generations, as most of these nations depend on the environment for their survival. Additionally, the findings of this study may resonate that of Kim et al. (2006) who found that more environmentally conscious people were more likely to attend a festival because of the content of the festival and this event was environmentally related and dealt with climate change, thus the large number of delegates from developing countries.

#### **4.3.2 Domestic delegates**

Almost a third of all the official delegates (32.4%) that were interviewed were South African. In terms of representation from the nine provinces, it is clearly evident in Table 4.5 that all the provinces in South Africa were represented at the conference. However, the number of delegates varied from a high of 47.6% from Gauteng to a low of 1.8% from Northern Cape. Significant numbers attended from KwaZulu-Natal (17.6%), Western Cape (15%) and the Eastern Cape (5.9%). The balance of the provinces had very few delegates compared to Gauteng, KwaZulu-Natal and the Western and Eastern Cape (Table 4.5). It can be assumed that the large proportion of delegates from Gauteng and Western Cape was because these are the provinces where several national government departments as well as administrative and legislative capital cities (Pretoria and Cape Town, respectively) are located in the South Africa. The high numbers from KwaZulu-Natal may be because of the location of the conference and its accessibility to delegates. Some of the arguments put forward for the increased number of African and other developing country delegates to COP 17 may also be applicable to domestic delegates.

**Table 4.5: Province of Domestic Delegates (n=170)**

<b>Province</b>	<b>Percent</b>
KwaZulu-Natal	17.6
Gauteng	47.6
Western Cape	15.3
Eastern Cape	5.9
Free State	2.9
Northern Cape	1.8
Limpopo	3.5
Mpumalanga	2.9
North West	2.4

#### 4.4 Attendance of civil society events

**Table 4.6: Delegates plan to or attended civil society events (n=525)**

<b>Response</b>	<b>Percent</b>
Yes	53.9
No	25.9
Don't know	20.2

According to the International Institute for Environment and Development (IIED, 2012), civil society can play an important role in climate change discussions. Some of the areas in which they can make a contribution are on policies and strategies on climate change and to make certain that the poor and vulnerable are considered by their governments (IIED, 2012). At COP 17, besides the official conference, there were various other associated events and one of the highlights was the civil society events. One of the main venues for these workshops and seminars was at the University of KwaZulu-Natal Howard College Campus which is in close proximity to the ICC, the location of COP 17. A question that was posed to official delegates was whether they attended or planned to attend any of the civil society events in addition to the main event. It is interesting to note that over half of delegates interviewed (53.9%) did attend civil society events whilst a quarter did not attend. Some delegates were not sure or did not know whether they would attend civil society events during the course of attending the main conference (Table 4.6). The fact that over half the interviewees attended or planned to attend a civil society event indicates that a substantial proportion of the respondents had some interest in the opinions of civil society.

#### 4.5 Accommodation choice and awareness of environmental best practices

According to Stern (2000), pro-environmental behaviour is undertaken to protect/ conserve change the environment. As discussed previously, various conceptual approaches have been developed to frame and predict pro-environmental behaviour based on an individual's attitudes, beliefs and subjective norms, specific attitudes (for example, recycling), general attitudes (for example, attitudes to air quality) (Reid et al., 2010). The attitude behaviour model has received substantial attention in tourism research (Lee et al., 2010). In this respect, the attitudes and behaviour regarding various issues will be discussed from the empirical data obtained.

##### 4.5.1 Type of accommodation

One of the most important components of any tourism research is to determine the impacts that it has on the economy, society and the environment. Choice of the type of accommodation by a delegate may directly or indirectly lead to either negative or positive impacts. Three, four and five star hotels were prominent with almost equal proportions residing in three (20%) and four star (20.6%) hotels. Over 10% stayed in five star hotels (10.7%), whilst the other accommodation types was budget (11.2%), guesthouses (10.3%), bed and breakfast (11.4%), backpacker establishments (2.1%), campsites (0.2%), rental accommodation (0.2%) and UKZN residences (1.9%). Local delegates (that is, from Durban and surrounds) stayed at home (4.2%) (Figure 4.2).

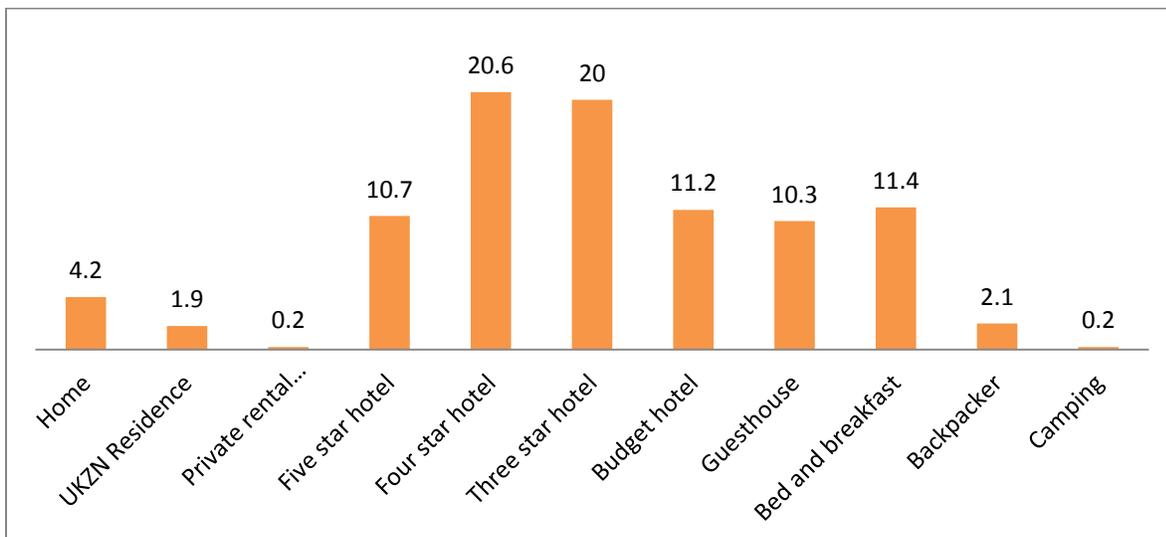


Figure 4.2: Accommodation type of delegates (n=525) (in %)

#### 4.5.2 Nights in accommodation

The average number of nights stayed by visiting delegates was 9.4 nights and ranged from 1 to 25 nights. It is clearly evident from Table 4.7, that the stay by the majority of delegates in the various accommodation types was less than the duration of the conference (that is, 14 days) with 61.2% stating that they stayed for between 1 to 10 days. However, some of the respondents stayed for more than 15 days which indicates the potential of MICE events as a tourist generator with its positive and negative impacts on the economy, society and environment. Most of the delegates (41.2%) stayed from 6-10 nights and an equally high proportion (33.4%) for 11-15 nights and 1-5 nights (20%). A minority of delegates (5.4%) remained for a longer period, that is, over 16 nights (Table 4.7).

**Table 4.7: Number of nights in accommodation (n=503)**

<b>Number of nights</b>	<b>Percent</b>
1-5	20
6-10	41.2
11-15	33.4
16-20	4.8
21-25	0.6

**X = 9.4 nights**

#### 4.5.3 Awareness of environmental best practices in accommodation

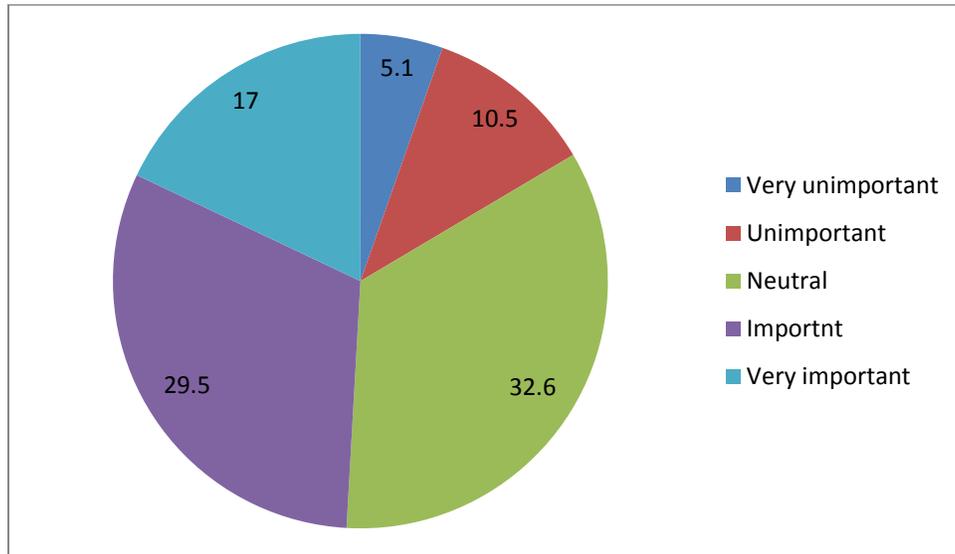
Budeanu (2007) found that tourist attitudes and behaviour differ and even though they may declare positive sustainable attitudes, only a few took action. To assess the attitudes of delegates, the question posed to delegates was whether they were aware of environmental best practices at accommodation establishments used. At this point, it is important to assess awareness of environmental best practices because later in the discussion, it is determined whether there is any relationship between awareness of environmental best practices and environmental responsible behaviour of delegates. Table 4.8 indicates various best practices that were practiced by hotel establishments as preferred by the delegates. The highest proportion of responses was for three best practices at accommodation establishments and these are the use of local labour (75.5%), conserving water (73.7%) and encouraging showering instead of bathing (77.1%). Over two thirds (67.5%) of respondents stated that establishments conserved electricity and 56.1% were aware that they promoted green behaviour. Smaller proportion of responses was obtained for the

use of Light Emitting Diode (LED) bulbs (49.3%), using green building standards (42.2%) and use of green products (49.3%). It was surprising to note that a number of delegates were unaware of environmental best practices at accommodation establishments although they were attendees at a climate change conference that debated related issues. Lee and Mascardo (2005) found in their study that pro-environmental behavioural intentions are revealed more by those respondents that are more aware. In the present study, as illustrated above, the majority of delegates were aware of best practices while some were not. To assess the behavioural intentions, a follow up question was asked and this focused on delegates' environmental considerations in the choice of accommodation. Before moving on to the discussion on this aspect it should be noted, however, that despite being aware of best practices, Weeden (2005) found that this does not necessarily mean that awareness will result in actual behaviour by tourists. Furthermore, as Govender et al. (2012) found in their study, the lack of knowledge about environmental best practices used in accommodation establishments could be attributed to accommodation facilities not adequately making their guests aware of the environmental practices. This is linked to Doody's (2010: 2) assertion that hospitality operators have limited knowledge on their environmental footprint which is hampering their ability to implement environmental practices, however, this is likely to change as pressure from "green tourists who will demand green accommodation as well as legislation" increases.

**Table 4.8: Awareness of environmental best practice at accommodation (n=503) (in %)**

<b>Environmental best practice</b>	<b>Yes</b>	<b>No</b>	<b>No response</b>
Conserving water	73.7	13.4	12.9
Showering instead of bathing	77.1	18.1	4.8
Conserving electricity	67.4	20.9	11.7
Use of LED bulbs	49.3	18.7	32
Green building standards	42.7	29.3	28
Promoting green behaviour change	56.1	22.6	21.3
Use of local labour	75.5	6.9	17.6
Use of green products	39.9	13.2	46.9

#### 4.5.4 Environmental considerations in choice of accommodation



**Figure 4.3: Rating of importance of environmental considerations in choice of accommodation (n=503) (in %)**

In terms of rating the importance of environmental issues in choosing accommodation during the conference, a significant proportion of respondents (32.6%) were neutral on this issues whilst 46.5% did understand the importance of choosing accommodation that gave due consideration to environmental issues (Figure 4.3). Over 15% of respondents (15.6%) did not consider this issue as important and this is another important finding of this study because it would be expected that all delegates attending an event such as COP 17 would assess the importance of environmental issues when choosing accommodation and not take a neutral stance or consider it as unimportant. Additionally, this raises questions about the environmental awareness levels and values of delegates who attend COP events and who are mandated or expected to inform policy formulation and implement strategies to address climate change concerns. Since most represent government departments or other organisations, it is possible that accommodation was chosen by the department/ organisation rather than the delegate. In this regard, Kollmus and Agyeman (2002) state that external factors such as institutional dynamics could have deterred delegates from exercising their own discretion on choosing accommodation and may concur with the findings. This suggests that institutions may not be considering environmental aspects when choosing accommodation. Yet, they are key clients that support the accommodation sector and

they can influence how this sector responds to environmental considerations by demanding or indicating preferences for establishments that demonstrate higher levels of environmental best practices in their establishments. The arguments put forward by Hares et al. (2010) from their review of theories on consumer behaviour using psychological, subjective and objective variables to understand behaviour could be applied to examine the pro-environmental behaviour of delegates in the context of climate change. As indicated above, the majority of delegates had positive attitudes towards environmental best practices but this is not clearly evident in the results on their choice of accommodation. Hares et al. (2010: 467) refers to the above as the ‘attitude behaviour gap’, which seems to be the situation in the context of this study. Moreover, the conclusions drawn by Miller et al. (2010 citing Kurani and Turrentine, 2002) show that situational constraints and the lack of practical alternatives even though there was awareness of environmental best practices may have limited the choices of delegates regarding accommodation.

#### **4.5.5 Knowledge of accommodation as a fair trade establishment**

**Table 4.9: Knowledge of whether accommodation is a fair trade establishment (n=503)**

<b>Response</b>	<b>Percent</b>
Yes	34.
No	21.1
Don't know	44.9

Only a small number of respondents (34%) knew that the accommodation that they booked into was a fair trade establishment. The rest of the respondents had no knowledge (21.1%) or did not know whether the accommodation was a fair trade establishment (Table 4.9). The number of negative responses for the question on fair trade concurs with the findings of Cleverdon and Kalisch (2000) in that little is known about fair trade in services such as the hospitality industry as it is intangible and presently fair trade in tourism is not widespread.

#### 4.5.6 Distance of accommodation to event activities and transport used

**Table 4.10: Distance of accommodation from venue where activities were held (n=525)**

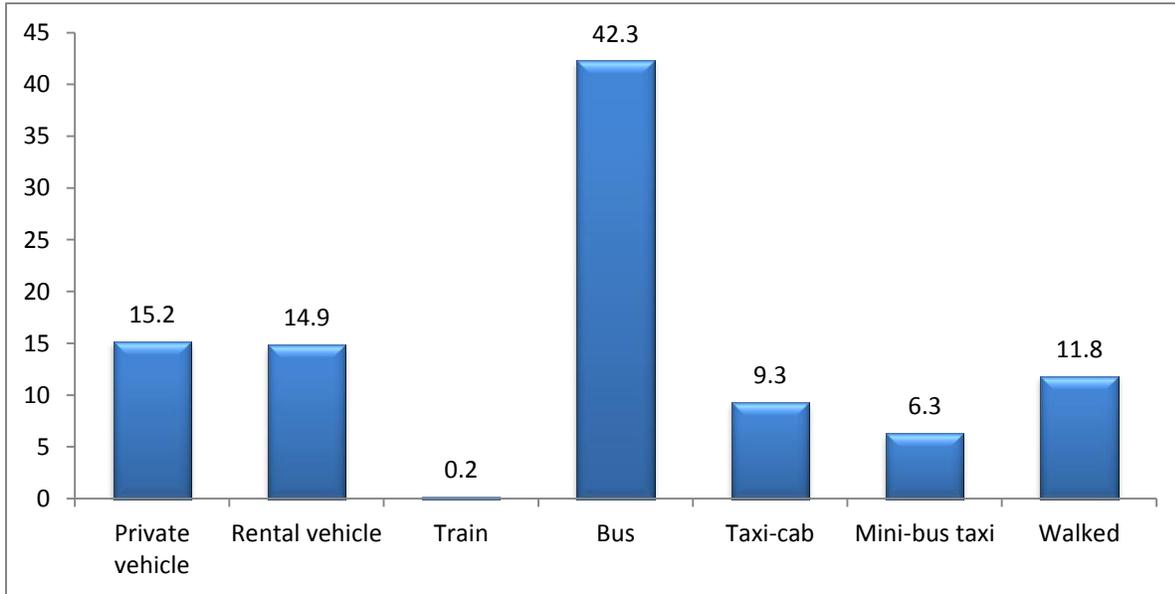
<b>Distance (km)</b>	<b>Percent</b>
0-9	48.9
10-19	21.7
20-29	11.2
30-39	5.5
40-49	2.1
50-59	1.5
60-69	0.8
70-79	0.2
80-89	0.2
90-99	1.1
Don't know	6.8

**X= 13.2 km**

Climate change is influenced by tourism in such sectors as transport (CO<sub>2</sub> emissions) (Hernandez and Ryan, 2011) which contributes to GHG emissions (Hares et al., 2011). Distance travelled and travel mode from the place of accommodation will contribute to gas emissions. Official delegates were therefore asked about the distance of their accommodation establishments from the conference venue to ascertain if delegates considered energy/fuel consumption whilst attending the conference. It is clear from Table 4.10 that the distance travelled ranged from less than 9 km to 99 km. Most of the delegates (81.8%) travelled less than 30 kilometres with the average distance being calculated to be 13.2 km which was relatively short. The majority of respondents (48.9%) travelled less than 9 km with 21.7% traveling 10-19 km and 11.2% travelling 20-29 km (Table 4.10). As mentioned above, the choice of accommodation played a substantial role in the distance travelled and internal, external factors and situational constraints could have played a role in choosing the establishment (Kurani and Turrentine, 2002 cited in Miller et al., 2010; Kollmus and Agyeman, 2002). In this instance, however, it was fortunate that the majority of delegates only travelled short distances from accommodation establishments close to the conference venue.

#### 4.5.7 Mode of transport to event

Davenport and Davenport (2006) argue that the most destructive ecological threat posed by tourism lies in the infrastructure and the transport arrangements that are required. Figure 4.4 shows the main mode of transport used by the delegates.



**Figure 4.4: Main mode of transport from place of accommodation to venues (n=525) (in %)**

Those who lived close to the conference walked (11.8%) whilst a large number of delegates (42.3%) used a bus. Almost equal proportions of respondents used private vehicles (15.2%) and rental vehicles (14.9%). A few of the delegates used a train (0.2%), taxi-cab (9.3%) and mini-bus taxis (6.3%) (Figure 4.4). It is clearly evident that the majority of delegates did consider the impact of transport by walking or using public transport and did exhibit pro-environmental behaviour, which according to Reid et al. (2010), is a general attitude which is based on an individual's attitudes, beliefs and subjective norms.

#### 4.6 Carbon emissions

Over 52.2% of the respondents had no intention to offset carbon emissions whilst 37.1% of delegates had positive intentions (Table 4.11). It was surprising to note that some delegates (10.7%) attending a COP 17 conference did not understand what carbon emission was. Carbon

emission are significant in any discussion on climate change as they are one of the main causes of climate change and one wonders why such delegates attend such a conference and what contribution could make to the deliberations. To a certain extent this resonates with the argument put forward by Reid et al. (2010: 309), who state that the majority of the public are still not convinced that they should undertake sustainable environmental practices. It may also be likely that delegates are more concerned with macro level issues (global climate change and its impacts) whilst ignoring micro level impacts that they themselves create. Another aspect that should be considered when interpreting the current data is the value added gap proposed by Reid et al. (2010). In this context, even though delegates may hold pro-environmental attitudes, their behaviour may not be displayed. This situation could apply to those delegates (about 48%) who had no intentions of offsetting carbon emissions.

**Table 4.11: Intention to offset carbon emissions (n=525)**

<b>Response</b>	<b>Percent</b>
Yes	37.1
No	52.2
Don't understand what 'carbon emission' is	10.7

Those delegates who had intentions of offsetting carbon emissions (n=195), used various methods as indicated in Table 4.12. Just over 23% intended to use any way possible, 14.3% stated that they would travel less during the conference, 11.8% would use public transport, 8.2% would recycle and 7.8% would walk. The rest of the respondents, comprising of minor proportions ranged from 1.5% to 6.1% (Table 4.12). The results show that most responses related travel aspects to reduce emissions. These findings concur with the conclusions drawn in the studies by Lee et al. (2012) and Kollmuss and Agyeman (2002) that these respondents had concern for the environment and tried to minimise any negative impacts by their actions.

**Table 4.12: Methods by which delegates intended to off-set carbon emissions whilst traveling (n=195)**

<b>Methods used</b>	<b>Percent</b>
Any way possible	23.6
Adopt carbon neutral lifestyle	6.6
Bicycle used	1.5
Fly on an airline which has a CO <sub>2</sub> off-cut service	3.1
Protecting the environment	3.1
Providing solutions to mitigate carbon emissions	2.6
Recycle	8.2
Travel less during the conference	14.3
Travel in groups	3.1
Use car which emits less pollution	4.6
Use public transport	11.8
Use energy efficiently	6.1
Use lift club	3.6
Walking	7.8

#### **4.7 Visits to conservation areas**

Wearing and Neil (2009) state that those who are interested in the natural environment and cultural heritage issues seek protection of the environment through prevention, improvement, correction of damage and restoration. They further assert that these visitors who have greater environmental knowledge and are concerned about environmental issues are more likely to dedicate their time to visiting natural sites. Supporting conservation initiatives is part of pro-environmental behaviour and this was examined by asking delegates if they intended to visit conservation areas in the country. Visiting conservation areas, with their diverse flora and fauna, is a common practice amongst tourists visiting foreign destinations. This trend was not apparent amongst the present respondents as indicated in Table 4.13. Furthermore, ecotourism or nature-based tourism is one of the main tourist products in South Africa (Rogerson and Visser, 2006). This again suggests that COP 17 delegates were generally unlikely to engage in other touristic behaviour which correlates with earlier findings that show that most of the delegates attending the event for less than the duration of the event. Thus, from an event tourism perspective, COP events may not have a substantial broader economic tourism impact which is confined to the host city.

**Table 4.13: Planned to or visited conservation areas whilst in South Africa (n=525) (in %)**

<b>Response</b>	<b>Durban</b>	<b>KwaZulu-Natal</b>	<b>South Africa</b>
Yes	37.3	22.9	18.3
No	53.7	67.4	67.4
Not applicable/ no response	10	9.7	14.3

Table 4.13 focuses on delegates who visited or planned to visit conservation areas these areas in Durban, KwaZulu-Natal or somewhere in South Africa. It was evident from the responses that only a minority of delegates 37.3%, 22.9% and 18.3%, respectively planned to visit conservation areas in Durban, KwaZulu-Natal and South Africa. A few delegates were unsure of visiting conservation areas in any location. This could be due to various reasons, the most important of which could be the busy schedule at the COP 17 event and the time constraints due to most respondents staying for less than the duration of the event. Although delegates may have had the intention to visit conservation areas, in terms of practice this was not possible due to various constraints that could have been contextual or situational in nature. The value added gap as proposed by Reid et al. (2010) may again apply in this situation in that even though delegates may have pro-environmental attitudes they may not show this by their behaviour. The above findings are in some respects similar to that of Budeanu (2007) in that even though these delegates may declare positive attitudes by attending a climate change conference very few of them took any action by visiting conservation areas, which would lead to contributing to conserving protected environments.

#### 4.8 Rating of COP 17 themes and impacts

**Table 4.14: Knowledge of COP 17 themes (n=525, in %) (1= Poor; 2 = Average; 3 = Good)**

Themes	Rating			
	1	2	3	Average
Sustainable development with changing climate	1.2	13.5	85.3	2.8
Reduction of GHG emissions (for example, carbon)	2.5	13	84.6	2.8
Water resources for human consumption in a changing climate (for example, drinking water)	3.8	17.1	79	2.7
Renewable/ alternate energy with changing climate	2.7	18.7	78.6	2
Governance, planning and policy-making with changing climate	5.6	20.8	73.7	2.7
Climate change financing	4.8	21.7	73.5	2.7
Adapting to and mitigating against climate change	4.4	23.2	72.4	2.7
Public engagement with changing climate	3.6	25	71.4	2.7
Monitoring climate change	5.2	24.6	70.3	2.6
Biodiversity conservation and ecosystem health with climate change	3.2	27	69.8	2.7
Disseminating information on changing climate	4.6	26.1	69.3	2.6
Climate change, conflict and society	8	34.7	57.3	2.5

As indicated in the literature review, knowledge creation is the outcome of education and it is important to preserve and improve the environment through environmentally responsible behaviour (Mensah, 2012). Increased subjective knowledge is assumed to change environmental attitudes and concerns (Mobley et al., 2010). Given some of the literature discussed earlier it was therefore highly likely that at COP 17 delegates' environmental knowledge, a product of their environmental education, would impact on their environmental behaviour. Based on the wealth of literature supporting the importance of knowledge of environmental issues in pro-environmental behaviour, COP 17 delegates' knowledge of environmental issues was assessed by asking them to rate their knowledge of the key themes discussed at the meeting. It was evident from Table 4.14 that sustainable development and reduction of GHG emissions (for example, carbon) were aspects in which delegates had a good knowledge (85% and 84.8%, respectively). This was followed by two themes in the upper 70 percentiles, that is, managing water for human consumption (79%) and alternate energy sources (78.6%). In the lower 70s range were five themes viz. policy, planning and governance (73.7%); climate change financing (73.5%); adaptation and mitigation strategies (72.4%); public participation (71.4%) and

monitoring and evaluation (70.3%). Almost equal proportions for a good rating were for biodiversity conservation and ecosystem health (69.8%) and disseminating information (69.3%) whilst the last theme was societal conflicts with 57.3%. The data was also subjected to further analysis, in accordance with the purpose of the Likert scale, by summing the scores and calculating the response averages. Averages were clustered with the lowest being 2.5 and the highest 2.8. The averages indicated that the majority of the respondents for all themes indicated a good rating albeit these ranged from 85.3% to 57.3%. It should also be noted that it may have been difficult for delegates when rating their knowledge of themes, as most are interlinked. The conclusion that can be drawn from the above discussion is that the rating in terms of knowledge of the themes did not differ considerably and delegates had a good knowledge of most of the themes. It can also be assumed that delegates were concerned with most macro-level issues regarding climate change and, as will be revealed later in the discussion, ignored micro-level issues regarding their carbon footprints that they themselves create by attending the COP 17 event.

**Table 4.15: Level of agreement with statements on environmental impacts of COP 17 (n=525, in %) (1= Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree)**

Statement	Response					Average
	1	2	3	4	5	
High levels of energy consumption	2.1	9	15.8	48.2	25	3.8
Air pollution increases	3	11.4	17.1	49.7	18.7	3.7
Solid waste increases	3	7.2	17.9	53.7	18.1	3.8
Areas more polluted/ lots of litter	5.3	16.2	33	35	10.5	3.3
Over-consumption of water	1.9	12.2	23	43.8	19	3.6
Noise pollution increases	4.8	20.8	32.4	33	9.1	3.2
Land loss/ habitat degradation	9.1	30.1	24.8	25.3	10.7	3
There is a loss of biodiversity	10.7	27.6	24	28	9.7	3
People learn more about conservation	3.6	4.4	9.9	39.2	42.9	4

It was important to determine delegates' level of agreement with various statements concerning the impacts of hosting the COP 17 conference in Durban. From the data presented in Table 4.15, it can be discerned that the majority of delegates either agreed or strongly agreed with five

impact statements, viz. there is high levels of energy consumption (73.2%), air pollution increases (68.4%), solid waste increases (71.8%), there is an over-consumption of water (62.8%), and people learn more about conservation (82.1%). The proportions for these positive responses ranged from a high of 82.1% to 62.8%. Most neutral responses were received for areas being more polluted/ lots of litter (33%) and noise pollution increases (32.4%). An equal number of neutral responses (24%) were also received for there is land loss/ habitat degradation and there is a loss of biodiversity. For the latter statements, there were a substantial number of delegates who strongly disagreed or disagreed (Table 4.15). These statements were areas were more polluted/ lots of litter (21.5%), noise pollution increases (25.5%), land loss/ habitat degradation (39.2%) and loss of biodiversity (38.3%). In terms of the averages that were calculated, it was clear that the highest was for people learn more about conservation (average of 4) and lowest was for land loss/ habitat degradation and loss of biodiversity (each averaging 3). The results indicate that respondents generally agreed or strongly agreed with statements that specify the negative environmental impacts of COP 17 as an event. As indicated earlier, one of the main assertions of this study is that COP events by its very nature and extent (thousands of official and civil society delegates travelling annually to the host city) have substantial environmental impacts. The results indicate that most of the respondents agree with this assertion. Following Luo and Deng (2008), the present finding of a high level of agreement with the negative environmental impacts associated with hosting a COP event could be the outcome of delegates' relatively higher level of awareness of environmental issues. The results also support the literature that outlines the environmental impacts of hosting events and the need to promote the greening of events.

#### 4.9 Green initiatives

**Table 4.16: Awareness of green initiatives at COP 17 (n=525) (in %)**

<b>Green initiatives</b>	<b>Yes</b>	<b>No</b>
Environmental volunteers	72.2	27.8
Green passport	45.1	54.9
Hosting a carbon neutral event	40.0	60.0
Climate train	41.3	58.7
Environmental responsible accommodation campaign	32.6	67.4
Community ecosystem-based adaptation (CEBA)	35.4	64.6

Awareness of green initiatives by delegates at COP 17 was also a task undertaken during the survey. It was apparent that the majority of delegates (72.2%) were only aware of the environmental volunteers at the conference. This could have been because of their visibility at the conference. Negative responses were received for the other five green initiatives that were proposed to respondents during the interview. These responses ranged in proportion from 54.9% to 67.4%. The highest negative responses were obtained for the environmental responsible accommodation campaign (67.4%) followed by CEBA (64.6%), climate train (58.7%), hosting a carbon neutral event (58.7%) and Green Passport (54.9%) (Table 4.16).

According to delegates who were aware of some of the green initiatives, 64.7% rated them as being very effective (Table 4.17). Just over half of the delegates rated the green passports and climate train very effective. A large proportion of delegates chose to be neutral and proportions ranged from 28% to 45%. Very few of the interviewees rated the green initiatives as ineffective (Table 4.17). The average responses for four of the green initiative ratings were similar (2.4). These included the green passport, hosting a carbon neutral event, climate train and the environmental responsible accommodation campaign (Table 4.17). The highest average rating (2.6) was for environmental volunteers and the lowest for CEBA (2.3) (Table 4.17).

**Table 4.17: Rating of green initiatives (n=525, in %) (1 = ineffective; 2 = neutral; 3 = very effective)**

<b>Green initiatives</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
Environmental volunteers (n=379)	7.1	28.2	64.7	2.6
Green passport (n=237)	9.7	38.0	52.3	2.4
Hosting a carbon neutral event (n=210)	7.1	45.2	47.7	2.4
Climate train (n=217)	13.4	36.4	50.2	2.4
Environmental responsible accommodation campaign (n=171)	11.1	40.9	48.0	2.4
CEBA (community ecosystem-based adaptation) (n=186)	15.0	39.3	45.7	2.3

When delegates were questioned on whether they knew of other green initiatives at COP 17, only a minority (28.4%) responded positively (Table 4.18). The rest (71.6%) stated that they were not aware of any other green initiatives at COP 17.

**Table 4.18: Awareness of other green initiatives at COP 17 (n=525)**

<b>Response</b>	<b>Percent</b>
Yes	28.4
No	71.6

Various initiatives were mentioned as indicated in Table 4.18. A few responses that stand out from the others were: be vegetarian/ go vegan (12.1%) and Green Peace (12.1%). The balance of the green initiatives, mentioned by delegates was all below 10%. These responses generally relate to knowledge of specific funds and/ or educational programmes as well as initiatives to promote the reduction of carbon emissions such as the use of solar energy as an alternative energy source. Additionally, it is also interesting to note that some of the green initiatives mentioned were not present at COP 17 but were either in the country of origin of delegates or practiced at a global level (Table 4.18).

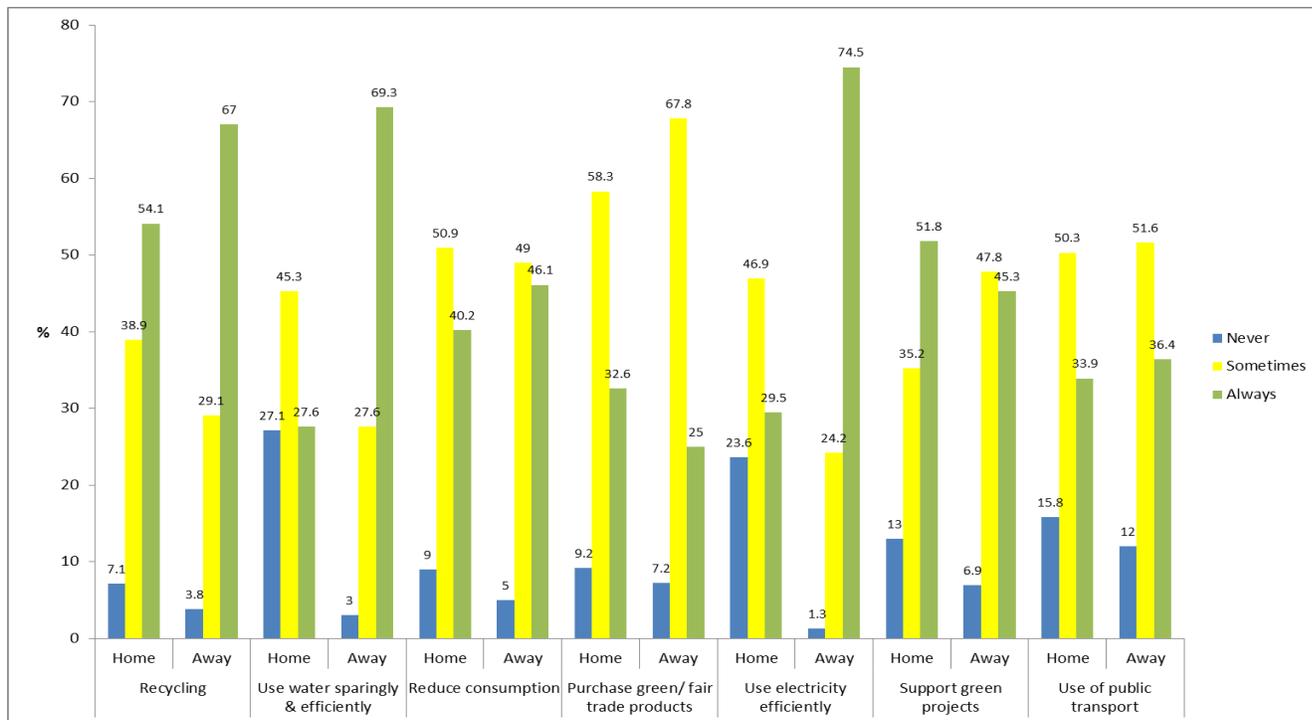
**Table 4.19: Delegates responses to other green initiatives at COP 17 (n=149) (multiple responses)**

<b>Responses</b>	<b>Percent</b>		<b>Responses</b>	<b>Percent</b>	
ACT Green	4	2.7	Global Witness	2	1.3
Africa Pavilion	1	0.7	Green Africa	1	0.7
Be veg, Go vegans	18	12.1	Green climate fund	2	1.3
Climate Smart Cape Town	10	6.7	Green economy	2	1.3
Beehive and vegetation	1	0.7	Green festival	1	0.7
Bicycle initiatives	2	1.3	Green forum	1	0.7
Bio-fuel use	3	3.0	Green hub	2	1.3
Biodiversity international	2	1.3	Green Peace	18	12.1
Carbon Footprint Calculator	4	2.7	Green tourism	8	5.4
CIFOR	3	3.0	Green/ climate caravan	1	0.7
Climate change march	9	6.0	Land and Forest Day	2	1.3
Climate smart agriculture	1	0.7	Living Beehive	1	0.7
Climate technology initiative	1	0.7	MH saving stoves	1	0.7
Climate train	2	1.3	My Space My Planet	3	3.0
Coca-Cola campaign	2	1.3	Non-motorised transport	2	1.3
Educational programme	2	1.3	Plant a tree day	4	2.7
Electric/ hybrid / solar cars	10	6.7	Seeds for survival	2	1.3
Forest and Ocean day	1	0.7	Solar energy initiative	4	2.7
Friends of Nature	1	0.7	Triple Green	2	1.3
Friends of the Earth	1	0.7	Use solar energy	2	1.3
German Land of ideas	1	0.7	World climate change summit	2	1.3
Global Footprint Network	2	1.3	World Wildlife Fund	5	3.3

In interpreting the results discussed above, it can be stated that the reason for delegates not noticing most of the other green initiatives at the conference could be because they were not advertised properly and there was a lack of organisation and planning at a management level by the various stakeholders involved. This type of situation at COP 17 is contrary to what Harrison and Husbands (1996) consider as responsible event tourism as highlighted in the literature review.

#### **4.10 Environmental behaviour of delegates at home and when travelling**

From the data collected in this research and indicated in Figure 4.5, it was clear that the majority of delegates engaged in all the environmentally friendly practices sometimes or always. The range in the data for the sometimes and always rating of behavioural practices was higher whilst travelling than that at home. The majority of delegates practiced certain activities always whilst travelling than at home and these included recycling (67% compared to 54.1% when at home), using water sparingly (69.3% compared to 27.6% when at home) and using electricity efficiently (74.5% compared to 29.5% when at home). Delegates also sometimes undertook the purchase of green fair products more whilst they were travelling (67.8% compared to 58.3% when at home). For the rest of the behavioural practices at home and when travelling the responses were almost evenly matched (Figure 4.5). Specifically, in terms of use of public transport, 50.3% (at home) and 51.6% (when travelling/ away) stated sometimes while 33.9% (at home) and 36.4% (when travelling/ away) stated always. In terms of reducing consumption, 50.9% at home and 49% when travelling/ away stated sometimes while 40.2% at home and 46.1% when travelling/ away stated always. In terms of supporting green projects, slightly more respondents engaged in these activities at home than when travelling (35.2% at home and 47.8% when travelling/ away stated sometimes while 51.8% at home and 45.3% when travelling/ away stated always).



**Figure 4.5: Rating of environmentally friendly practices undertaken by delegates when traveling (including COP 17)**

The results of this study are contrary to the findings of Dolnicar and Leisch (2008) who comparatively assessed pro-environmental behaviour at home and on vacation. According to their findings, there was more pro-environmental behaviour at home because there was a difference in the infrastructure at home as compared to destinations that tourists visited. This was due to higher moral obligation at home which could not be transferred to destinations because of infrastructure (Dolnicar and Leisch, 2008). These are the situational factors, for example, greater access to facilities, as described by Guagnano et al. (1995) and Barr (2003) that impact on pro-environmental behaviour. The difference in the results of the current study and that of Dolnicar and Leisch (2008) could be attributed to the type of respondents who were interviewed in this study. Dolnicar and Leisch (2008) interviewed respondents on vacation whilst this study focused on delegates to an event that focused on environmental issues and, therefore, these respondents could have been morally obliged to act more pro-environmentally. Moral obligation was found by Berenguer et al. (2005) to strongly influence pro-environmental behaviour. An additional dimension that should be considered in the present study is the “spill-over” effect as described by Barr et al. (2011: 1235). It could have applied in this instance whereby the commitment of

respondents at home could have been transferred to the destination much more strongly because of their participation in a climate change conference. The findings of the present study are also contrary to that of Budeanu (2007: 499) who concluded that even though tourists may declare positive sustainable attitudes only “about 5% took any action by purchasing responsible tourism packages, buying locally produced goods or using transport that was environmentally friendly”.

#### **4.11 Relationships between socio-demographic variables, knowledge and awareness of environmental best practices**

This section of the analysis focuses on attempting to indicate whether there were any relationships that existed between selected socio-demographic independent variables (age, gender and education) and awareness of environmental best practices at accommodation establishments using predetermined practices derived from the literature (Table 4.20). An attempt is also made to test the existence of any relationships between knowledge of delegates of COP 17 themes and environmental best practices (Table 4.21). This section also draws relationships between socio-demographic variables, knowledge and behaviour of delegates (Table 4.22 and Table 4.23). The Pearson’s Chi-square test at the 95% confidence interval was applied to the data set to show the prevalence of any relationships. Relationships that were found between the independent and dependent variables are highlighted in the following tables.

##### **4.11.1 Relationship between socio-demographic variables and awareness of best practices**

**Table 4.20: Relationship between socio-demographic variables and awareness of environmental best practices**

	<b>Socio-demographic characteristics( Chi-square p values)</b>		
<b>Environmental best practice</b>	<b>Age</b>	<b>Gender</b>	<b>Education</b>
Conserving water	0.12	0.04	0.00
Recommending showering	0.08	0.03	0.02
Conserving electricity	0.05	0.04	0.00
Use of LED bulbs	0.00	0.05	0.00
Green building standards	0.05	0.15	0.00
Promoting green behavioural change	0.07	0.24	0.00
Use of local labour	0.18	0.08	0.00
Use of green products	0.00	0.45	0.00

**Highlighted Chi-square p-values indicate significant relationship at the 95% confidence interval**

It is clearly evident from Table 4.20 that there is a significant relationship between education of delegates and all the environmental best practices at accommodation establishments with all the p-values being less than 0.05. Age was related to only four best practices and these were conserving electricity, use of LED bulbs and green building standards and use of green products. The number of best practices strongly related to gender was similar to that of age. This relationship differed in terms of not having the practice of using green products but being related to conserving water and recommending showering. Age and gender were therefore only strongly related to certain best practices at accommodation establishments. It should be noted that there are difficulties in attempting to show the relationship between socio-demographic factors and attitudes. As mentioned previously, these difficulties and conflicting findings have been identified in a review undertaken by Mensah (2012) who concluded that various factors influence attitude and these include external (institutional and cultural) and internal (emotional, responsibilities and priorities) variables. These factors could have influenced the present study findings.

#### **4.11.2 Relationship between knowledge and awareness of best practices**

Knowledge of a few themes was significantly related to certain environmental best practices. These included sustainable development being related to green building standards ( $p=0.00$ ) and promoting green behaviour ( $p=0.05$ ). Reduction of GHGs was only significantly related to conserving water ( $p=0.00$ ) whilst governance, planning and policy making was related to the following three best practices, that is, showering ( $p=0.00$ ), conserving electricity ( $p=0.03$ ) and promoting green behavioural change ( $p=0.05$ ). Delegate's knowledge of adapting to climate change was related to four best practices including conserving water, showering and conserving electricity and use of local labour with the values being  $p=0.02$ ,  $p=0.00$ ,  $p=0.05$  and  $p=0.02$ , respectively. The only other knowledge variable that had any significant relationship to best practice was biodiversity conservation and ecosystem health. This variable was significantly related to showering ( $p=0.03$ ) and the use of local labour ( $p=0.00$ ). It was interesting to note that the statistical calculation did not reveal any significant relationship between monitoring climate change, disseminating information on climate change and conflict and society with any of the best practices (Table 4.21).

**Table 4.21: Relationship between knowledge and environmental best practice**

Knowledge of themes	Environmental best practices ( Chi-square p values)							
	Conserving Water	Showering	Conserving Electricity	Use of LED Bulbs	Green Building Standards	Promoting Green Behavioural Change	Use of Local Labour	Use of Green Products
Sustainable development	0.207	0.135	0.316	0.066	0.000	0.050	0.755	0.400
Reduction of GHGs	0.007	0.213	0.147	0.484	0.106	0.399	0.348	0.528
Water resources for human consumption	0.455	0.780	0.922	0.609	0.909	0.387	0.020	0.379
Renewable/alternate energy	0.902	0.610	0.463	0.872	0.629	0.742	0.445	0.816
Governance, planning and policy making	0.280	0.004	0.035	0.222	0.674	0.015	0.276	0.386
Climate change financing	0.497	0.043	0.258	0.786	0.767	0.005	0.257	0.504
Adapting to climate change	0.022	0.000	0.050	0.641	0.313	0.261	0.027	0.352
Public engagement with changing climate	0.364	0.101	0.192	0.204	0.358	0.103	0.007	0.100
Monitoring climate change	0.785	0.553	0.478	0.483	0.496	0.373	0.269	0.086
Biodiversity conservation and ecosystem health	0.343	0.030	0.197	0.138	0.592	0.097	0.009	0.370
Disseminating information on changing climate	0.878	0.383	0.867	0.390	1.000	0.129	0.127	0.505
Climate change, conflict and society	0.862	0.972	0.910	0.082	0.378	0.124	0.581	0.400

Highlighted Chi-square p-values indicate significant relationship at the 95% confidence interval

Direct relationships have been found to exist between knowledge and attitudes because people with knowledge are more sympathetic to environmental problems (De Chano, 2006; Mensah, 2012; Thapa et al., 2005; Weaver, 2002). The present study found that there was a significant relationship between education and all best practices. Knowledge of a few environmental themes was also significantly related to some environmental best practices. This is in line with the findings of the social scientists mentioned above and Kuhlemeier et al. (1999) who found a relationship to exist between knowledge and attitudes.

#### 4.11.3 Relationship between socio-demographic variables and environmental behaviour

The results of the calculations indicated in Table 4.22 illustrate that age was the only variable significantly related to the majority of behavioural practices. Most of these relationships were related to behavioural practices at home and these included reducing consumption (p=0.04), using electricity efficiently (p=0.05) and supporting green projects (p=0.00). Significant relationships between age whilst travelling were recycling and purchasing green/ fair trade products which had similar p-values (p=0.00). Gender was only significantly related to

supporting green projects at home and education was related to only one behavioural practice which was recycling at home ( $p=0.03$ ). In the overall assessment of the relationship between socio-demographic characteristics and behaviour practices by delegates at home and when travelling, it was clearly evident that there was slightly more behavioural practices conducted at home that were significant than whilst travelling, four at home and three when travelling. Moreover, not all socio-demographic variables were significantly related to all behavioural practices (Table 4.22).

**Table 4.22: Relationship between socio-demographic characteristics and environmental responsible behaviour**

Environmental Behaviour		Socio-demographic characteristics ( Chi-square p values)		
		Age	Gender	Education
Recycling	H	0.143	0.975	0.424
	T	<b>0.002</b>	0.570	<b>0.037</b>
Use water sparingly	H	0.468	0.610	0.277
	T	0.507	0.361	0.180
Reduce consumption	H	<b>0.046</b>	0.856	0.551
	T	0.104	0.657	0.416
Purchase green/fair trade products	H	0.596	0.491	0.802
	T	<b>0.008</b>	0.639	0.695
Use electricity efficiently	H	<b>0.050</b>	0.784	0.224
	T	0.137	0.800	0.206
Support green projects	H	<b>0.002</b>	<b>0.001</b>	0.150
	T	0.776	0.761	0.373
Use of public transport	H	0.496	0.250	0.652
	T	0.764	0.861	0.365

Highlighted Chi-square p-values indicate significant relationship at the 95% confidence interval

H = home; T = travelling

The present study found that not all demographic factors were related to ERB. This is similar to the study findings of Uysal and Jurowski (1994), Formica and Uysal (2002) and Zografos and Allcroff (2007) who revealed that demographics were not significantly related to environmental behaviour. The results were, however, contrary to the study by Tubb (2003) who found that environmental education or interpretation positively influenced a tourist's environmental attitude or behaviour. In some respects the current study is similar to the findings of Dolnicar and Leisch (2008) who established that there was an inconsistent relationship between socio-demographics

and ERB.

#### **4.11.4 Relationship between knowledge and environmental behaviour**

Table 4.25 reveals that delegates' knowledge of sustainable development was significantly related to most of the behavioural practices at home and when travelling except for the use of water sparingly and the use of public transport which had no significant relationship. Of the behavioural practices that had a significant relationship, recycling only applied to this practice when delegates travelled. Reduction of GHGs was significantly related to recycling, purchasing green/ fair trade products and supporting green projects at home and when travelling and only significantly related to supporting the use of public transport when travelling. Most of the behavioural practices undertaken significantly related to knowledge of renewable/ alternate energy were practiced whilst travelling except for the use of public transport at home. A similar relationship existed with regard to knowledge of water resources for human consumption and governance and planning. Another area of knowledge that had significant relationships to most of the behavioural practices was biodiversity conservation and ecosystem health. This was related to purchase of green/fair trade products and supporting green projects at home and at the tourist destination. Moreover, it was related to using water sparingly ( $p=0.00$ ), reducing consumption ( $p=0.00$ ) and using electricity sparingly ( $p=0.03$ ). The knowledge variables that were significantly related to only a few behavioural practices was public engagement with changing climate, climate change financing, disseminating information on changing climate and climate change, conflict and society.

**Table 4.23: Relationship between knowledge and environmental behaviour**

Knowledge	Environmental behaviour ( Chi-square p values)													
	Recycling		Use water sparingly		Reduce consumption		Purchase green/fair trade products		Use electricity efficiently		Support green projects		Use of public transport	
	H	T	H	T	H	T	H	T	H	T	H	T	H	T
Sustainable development	0.076	0.000	0.387	0.150	0.061	0.000	0.039	0.001	0.024	0.003	0.001	0.001	0.735	0.323
Reduction of GHGs	0.008	0.001	0.305	0.228	0.722	0.061	0.007	0.006	0.241	0.064	0.020	0.003	0.059	0.047
Water resources for human consumption	0.000	0.006	0.164	0.001	0.870	0.002	0.156	0.031	0.369	0.203	0.490	0.011	0.247	0.585
Renewable/alternate energy	0.121	0.077	0.115	0.003	0.589	0.040	0.263	0.025	0.968	0.490	0.148	0.001	0.032	0.588
Governance, planning and policy making	0.560	0.001	0.769	0.002	0.830	0.000	0.060	0.009	0.041	0.000	0.007	0.115	0.556	0.004
Climate change financing	0.094	0.307	0.150	0.113	0.170	0.267	0.323	0.979	0.259	0.570	0.403	0.367	0.013	0.243
Adapting to climate change	0.014	0.279	0.050	0.300	0.211	0.001	0.068	0.205	0.789	0.301	0.040	0.302	0.698	0.520
Public engagement with changing climate	0.216	0.114	0.864	0.000	0.730	0.081	0.322	0.341	0.783	0.266	0.179	0.238	0.898	0.394
Monitoring climate change	0.776	0.000	0.390	0.027	0.339	0.088	0.204	0.885	0.904	0.324	0.509	0.025	0.083	0.114
Biodiversity conservation and ecosystem health	0.090	0.605	0.256	0.001	0.399	0.003	0.000	0.018	0.752	0.039	0.013	0.017	0.217	0.088
Disseminating information on changing climate	0.087	0.170	0.110	0.013	0.294	0.232	0.224	0.251	0.684	0.031	0.250	0.000	0.461	0.687
Climate change, conflict and society	0.003	0.085	0.100	0.173	0.800	0.151	0.145	0.374	0.426	0.453	0.005	0.000	0.143	0.406

Highlighted Chi-square p-values indicate significant relationship at the 95% confidence interval

From the above analysis it is evident that significant relationships existed between several knowledge of environmental issues and behavioural practices at home and while at the tourist destination. The ideas of Barr (2003) and Schahn and Holzer (1990) can be used to discuss this situation. These social scientists categorise knowledge into concrete (behaviour used and acted on) and abstract (knowledge on environmental issues and problems) (Barr; 2003; Schahn and Holzer, 1990). It was evident that delegates had both concrete and abstract knowledge and as residents in their places of origin and as tourists most of the delegates did apply their knowledge in their behavioural practices .

In concluding this section it should be noted that the factors that influence environmental behaviour are complex and context specific as illustrated by Robelia and Murphy (2012). The reason for this is because there is an interaction between variables such as socio-demographic variables and knowledge to influence attitudes and responsible behaviour (Mensah, 2012). Another variable that should be considered is moral obligation which influences ERB (Dolnicar and Leisch, 2008). It is evident from the above discussion that there are contrasting ideas on the issue of determining the relationships between socio-demographics, knowledge and environmental behaviour.

#### **4.12 General comments of delegates**

At the conclusion of the interview, delegates were asked to make some general comments. This is illustrated in Table 4. Only 15% of the delegates made comments. The proportion of responses ranged from as low as 1.2% (hotel accommodation was bad) to a much larger group (11.2%) who commented that the current survey was a good idea and that the results should be published. An equal proportion of respondents (9.9%) stated that COP 17 was a well-organised meeting and Durban was a beautiful city. Similar numbers (8.6%) commented that Durban has good weather and the people were friendly and helpful. This was followed by an equal but smaller proportion of respondent (7.4%) who mentioned that climate change was important and some hoped that COP 17 came to some beneficial agreement. As is evident from Table 4.24, various other responses comprising of minor proportions were also forwarded and these responses focused on such issues as the march, hotel accommodation and disappointment with COP 17.

**Table 4.24: General comments by delegates (n=81)**

<b>Comments</b>	<b>Percent</b>
Accommodation too expensive	4.9
Africans must take advantage of meeting to impact climate change	4.9
Climate change is important	7.4
COP 17 is a well-organised meeting	9.9
City not large enough to accommodate tourists	4.9
Durban is a beautiful city	9.9
Durban has good weather	8.6
Durban is a good host city	6.2
People are friendly and helpful	8.6
Disappointed with COP 17	3.7
Everyone must become vegetarians to solve climate problem	2.5
Have virtual COP meetings to lessen impact on climate	6.2
Hope COP 17 comes to some beneficial agreement	7.4
Hotel accommodation is bad	1.2
March was good	2.5
Survey good idea - publish results	11.2

#### **4.13 Conclusion**

In order to understand the patterns and trends that emerged from the primary survey data it was useful in the analysis to begin with a description of the study population. This was necessary because the socio-demographic variables were also required later in the analysis when relationships were established between awareness and behavioural variables in terms of the objectives of this study. The analysis and discussion then progressed to examining the place of origin of delegates, their attitudes and perceptions to accommodation choice, awareness of environmental best practices, environmental considerations in choice of accommodation, knowledge of accommodation as a fair trade establishment, distance of accommodation to event activities and transport used, intention to off-set carbon emissions, intention to visit conservation areas, rating of COP 17 themes and impacts, awareness and rating of green initiatives, environmental behaviour of delegates at home and when travelling, relationships between socio-demographic variables, knowledge and awareness of environmental best practices and the relationships between socio-demographic variables, knowledge and environmental responsible behaviour. The final section dealt with general comments made by some of the delegates. The final Chapter of this dissertation provides a summary of the research findings together with conclusions, recommendations, limitations and some suggestions for future research.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

The fundamental interests of a geographer are place, space and the environment (Hall and Page, 2009). The interest among geographers in undertaking research describing the relationship between tourism and the environment has resulted in a growing body of literature being published on the subject (Butler, 1999; Cornelissen, 2005). However, there is little literature on the attitudes, perceptions and behaviour of delegates at a climate change conference or similar event. The central concern in this research is, therefore, on determining the socio-demographic characteristics, knowledge of COP 17 themes and the attitudes, and perceptions and behaviour of delegates from a geographical perspective in an attempt to make some contribution to the literature on tourism geography. As reflected in the Chapter on methodology, and being the tradition in most geographical studies, a holistic perspective in the study design was used that integrated both multi-conceptual and multi-disciplinary approaches.

An important aspect that needs some reflection at this stage is the initial conceptualisation of the study in terms of the objectives that were formulated. This will be briefly alluded to before a summary of the results and conclusions are drawn. The initial point of departure in the conceptualisation of the study was the delegates at COP 17 are considered to be event tourists. Delegates' behaviour could positively or negatively impact on the environment. Their behaviour is influenced by socio-demographic and psychological variables together with knowledge which is expressed by their attitudes and perceptions. The behaviour of tourists influences sustainable tourism, sustainable development, policy, and management. Changes in policy and management of tourism will influence future MICE and event tourism and also the socio-psychological aspects of future tourists such as their attitudes and perceptions. This type of research is significant as an understanding of attitudes and behaviour of tourists at destination areas is crucial to change behavioural patterns so that negative environmental impacts are decreased. In the present study, an attempt was undertaken to determine whether delegates with a high degree of commitment due to their involvement in the climate policy arena engage in pro-environmental behaviour as event tourists.

## **5.2 Summary of results**

### **5.2.1 Objective One: Socio-demographic profile of delegates attending COP 17.**

In order to understand the sampled population, their socio-demographic characteristics were determined. The purpose of this exercise was also for further analysis regarding the responsible environmental behaviour of delegates. The majority of delegates were middle aged with males predominating. Although women are considered to be more environmentally concerned their small numbers could be attributed to the nature of the conference and the predominance of African delegates where males dominate. The majority of delegates were more than adequately qualified with postgraduate degrees and earning above average incomes although there were extremes in income earnings.

African delegates comprised the majority of delegates, followed by delegates from Europe and North America with most nations from these continents being represented. About one-third of official delegates were South African, the majority attending were from Gauteng, KwaZulu-Natal and the Western Cape provinces. The likely reasons for the predominance of African delegates include the close proximity of the conference to their countries and the perception and factual evidence that African countries are and will be most affected by climate change and its adverse impacts on the environment. Therefore, the obvious reason for the attendance of a significant number of delegates from western countries was that they are the chief decision-makers within the global climate policy arena. Additionally, the values of societies in western countries have changed from meeting basic needs to improving quality of life whereas developing countries attend these meetings because they are most affected by climate change and are more conscious of climate issues.

### **5.2.2 Objective Two: Delegate choice of accommodation facility used during COP 17**

#### **5.2.2.1 Accommodation choice**

Choice of the type of accommodation may directly or indirectly lead to either negative or positive impacts on the environment. A large number of delegates stayed in three, four and five

star hotels. Budget hotels, guesthouses, bed and breakfast, backpacker establishments, campsites and rental accommodation were the choice of accommodation of a minor proportion among visiting delegates. Approximately 9 nights was the average stayed in an accommodation establishment. In choosing accommodation, a significant proportion of respondents understood the importance of accommodation that gave due consideration to environmental issues. The neutral stance taken by a significant number of delegates is of concern as it would be expected that delegates attending a conference on environmental issues would take a position on choosing accommodation that gave due consideration to environmental issues. Delegates living in the various accommodation types stayed generally less than the duration of the 14 days of the event which suggests that COP events, unlike other events such as sports events do not generate substantial interest in other tourism products and activities in the host region. It therefore is limited as a tourist generator outside the host city and the direct economic impacts linked to the event.

#### **5.2.2.2 Awareness of environmental best practices at accommodation**

Environmental best practices followed by accommodation establishments are an important component in any tourism study. The study attempted to assess the awareness of delegates of these best practices using predetermined criteria from the literature applicable to accommodation establishments. A significant proportion of delegates were aware of several best practices at their accommodation viz. conserving water, showering, the use of local labour, conserving electricity and promoting green behaviour. The conclusion that can be drawn from the data is that South Africa's tourism accommodation sector is well on its way in the implementation of environment best practices in most areas at their establishments which is also reiterated by Sucheran (2013). Awareness by delegates of environmental best practices could have influenced the pro-environmental behaviour of most delegates whilst they were at the conference.

#### **5.2.2.3 Choice of fair trade accommodation**

An additional part of the inquiry was testing the responsible tourism practices of delegates in terms of their choice of fair trade accommodation establishments and distances that they stayed from the event. The majority of delegates had no knowledge or did not know whether their accommodation establishments practiced fair trade. This finding is acceptable as not much is

known about fair trade especially in the hospitality industry and as stated in the previous chapter is not widespread (Cleverdon and Kalisch, 2000; Sucheran, 2013).

#### **5.2.2.4 Distance stayed from event and transport mode**

Distance was used as a responsible tourist variable to ascertain the importance placed by delegates on fuel saving and limiting environmental pollution. Most delegates travelled short distances by public transport with the average distance travelled to the event being approximately 13 km. This indicates that some consideration was taken of energy saving and curbing pollution. It should be noted, however, that institutional or other external and situational factors could have influenced the choice of accommodation and subsequently the distance travelled to the event as discussed in the previous chapter in line with the findings of social scientists such as Agyeman (2012), Kollmus and Agyeman (2002) and Miller et al. (2010).

### **5.2.3 Objective Three: Delegate knowledge of COP 17 themes and awareness of environmental impacts**

#### **5.2.3.1 Delegate knowledge of COP 17 themes**

In this section the researcher attempted to ascertain whether delegates possessed adequate knowledge of the environmental issues that were likely to influence their environmental behaviour by asking delegates to rate their knowledge of COP 17 themes. It was evident that sustainable development and reduction of GHG emissions were areas in which delegates had a very good knowledge, followed by slightly lower proportion of responses for managing water for human consumption and alternate energy sources. A minority of responses was received for the other themes. The averages that were calculated of the rating was clustered which may be due to the themes being so closely related and it can be concluded that the ratings did not differ significantly. Since delegates had more than an adequate knowledge of environmental issues it can be assumed that this would be instrumental in impacting on the environmentally responsible attitudes and behaviour of delegates.

### **5.2.3.2 Environmental impacts of COP 17**

Delegates' levels of agreement with various statements concerning the impacts of hosting the COP 17 conference in Durban were assessed. It can be discerned that in relation to six general impact statements there was a very high agreement. These impacts included: high levels of energy consumption, air pollution increase, solid waste increase, over-consumption of water, people learn more about conservation and taking care of the environment. As stated earlier, this may be due to the positive environmental beliefs and attitudes of the delegates.

### **5.2.4 Objective Four: Delegate engagement in responsible environmental behaviour and awareness of green initiatives at the COP 17 events**

#### **5.2.4.1 Awareness of green initiatives**

The majority of delegates were only aware of the green volunteers at the conference and this was very highly rated in terms of its effectiveness. Most of the responses for the other green initiatives (green passport, carbon neutral event, climate train, environmental responsible accommodation and CEBA) were almost equally divided between the neutral and positive rating. The reason for most delegates being aware of the green volunteers may have been because of the large numbers present at the conference and their apparent visibility. The reason for delegates not noticing most of the other green initiatives at the conference could be because they were not advertised properly and the lack of organisation and planning of these initiatives. This could also indicate a lack of focus in terms of responsible event tourism.

#### **5.2.4.2 Visits to conservation areas**

Supporting conservation initiatives is part of pro-environmental behaviour and this was examined by asking delegates if they intended to visit conservation areas in the country. Visiting conservation areas, with their diverse flora and fauna, is a common practice amongst tourists visiting foreign destinations. This trend was not apparent amongst the present respondents as only a minority had any intentions of undertaking such visits. This could be due to the various reasons, the most important of which could be the busy schedule at the COP 17 event and the time constraints due to the short duration of the event. Although delegates may have had the intention to visit conservation areas, in terms of practice this was not possible due to various

constraints that could have been contextual or situational in nature. The value added gap as proposed by Reid et al. (2010) may also apply in this situation in that even though delegates may have pro-environmental attitudes they may not show this behaviour.

#### **5.2.4.3 Intention to off-set carbon emissions**

In the present study this proposed relationship between individual concern/ beliefs and pro-environmental behaviour was explored by assessing the intentions of COP 17 delegates to offset their carbon emissions created during travel. An analysis of the survey data clearly illustrates that only about half the respondents had any intention to off-set carbon emissions with only a minority having positive intentions or not knowing what carbon emissions were. As concluded in the previous Chapter, this situation could be attributed to more concern with macro level issues than the impacts that delegates create by their very presence at the conference. Those delegates who intended to off-set carbon emissions, the most popular of which was by using any means possible, indicate intentions and pro-environmental behaviour which would directly or indirectly reduce carbon emissions. Most related to travel aspects. The minority who had no intentions to off-set carbon emissions may have positive intentions (attending the conference) but did not display these intentions by taking action.

#### **5.2.4.4 Delegates' pro-environmental behaviour at home and whilst travelling**

For several of the pro-environmental practices under examination the responses for engaging in these activities sometimes and always were higher whilst travelling than that at home. The majority of delegates always practiced certain activities more whilst travelling than at home. These included recycling as well as using water sparingly and electricity efficiently. They sometimes purchased green fair trade products more when travelling than at home. As indicated earlier, the findings of this study are contrary to previous studies that found more environmentally responsible behaviour being practiced at home than at tourist destinations. The differences could be attributed to the type of delegates that were interviewed as these respondents were not the normal visitor but delegates to a climate change conference who have an obligation to act more responsibly.

## **5.2.5 Objective Five: Relationship between socio-demographic characteristics of delegates and knowledge, awareness of environmental best practices and environmental responsible behaviour**

### **5.2.5.1 Socio-demographic characteristics, knowledge and environmental best practices**

The present study found that there was a significant relationship between education and all environmental best practices with age and gender having significant relationships to certain best practices. Knowledge of a few environmental themes was also significantly related to some environmental best practices. The conclusions that can be drawn from the analysis of data in the present study can only lead to the partial acceptance of the findings of previous studies. This is due to the fact that the variables tested were not significantly related to all best practices.

It was also found that found that only age was significantly related to a large number of behavioural practices, mostly at home. Moreover, gender was significantly related to supporting green projects, education and recycling. Even in this case, the socio-demographic variables used in this study were not significantly related to all behavioural practices. An added issue that should be considered, as mentioned previously, and that is contrary to most research findings, was the behaviour of most delegates who practiced ERB more whilst traveling than at home.

Direct relationships were found to exist between knowledge and ERB because people with knowledge are more sympathetic to environmental problems (De Chano, 2006; Mensah, 2012; Thapa et al. 2005; Weaver, 2002). The present study found that there was a significant relationship between education and all best practices with age and gender having significant relationships to certain best practices. Knowledge of a few environmental themes was also significantly related to some environmental best practices. This is in line with the findings of the social scientists mentioned above and Kuhlemeier et al. (1999) who found a relationship to exist between knowledge and attitudes. However, it should be noted that in this study a partial acceptance of previous studies is justified, as socio-demographic variables and knowledge were not significantly related to all best practices.

### **5.2.6.2 Socio-economic characteristics, knowledge and behaviour**

The present study found that only age was significantly related to a large number of behavioural practices, mostly at home. Moreover, gender was significantly related to supporting green projects and education to recycling. Even in this case, the socio-demographic variables used in this study were not significantly related to all behavioural practices. An added issue that should be considered, as mentioned previously and that is contrary to most research findings, was the behaviour of most delegates who practiced ERB more whilst traveling than at home. In terms of knowledge and ERB, it can be concluded that a significant relationships existed between knowledge of environmental issues and behavioural practices at home and while at the tourist destination.

From the discussion presented above and in the previous Chapter, it can be concluded that difficulties exist in attempting to draw relationships between socio-demographic variables, knowledge and attitudes, and behaviour. The literature review identifies these difficulties as expressed by social scientists such as Bamberg and Moser (2007), Formica and Uysal (2002), Mensah (2012) and Zografos and Allcroft (2007). There are other factors that shape ERB, for example, internal and external factors including economic, cultural and moral aspects. These variables combine to influence ERB and no one variable such as socio-demographic profile or level of knowledge can influence ERB.

## **5.2.6 Objective Six: Suggestions and recommendations regarding COP 17 as a large-scale tourist event.**

### **5.2.6.1 Scheduling and organisation of COP events**

From the analysis of data it was evident that delegates were fully aware of the negative environmental impacts of COP 17. The question therefore is whether these meetings should be held annually because of their negative impacts in destination areas. It is suggested that instead of holding annual meetings at different locations globally, regional meetings be held on a country basis annually. After reaching consensus at these meetings, a few delegates should be chosen from each country to be representatives every five years at a centrally located COP event. Alternatively, all the COP events should be held via video-conferencing. The above strategies

proposed would drastically reduce the carbon footprint created by COP events and the negative impacts that it causes.

#### **5.2.6.2 Travel mode**

Wall et al. (2007) following Collin and Chambers (2005) aver that an individual's decision on choice of travel mode is one of the most environmentally significant factors. For delegates at the COP 17 event, especially those not from Durban and surrounding areas, air transport was unavoidable. To come to Durban from overseas, air travel is the only mode of transport. Delegates have no choice but to travel by air. The flight options of delegates are, however, important. In this respect, it is suggested that the ideal flight could be that which has fewer stopovers to reduce carbon footprints. Air travel or the use of fossil fuelled vehicles affect air quality and impact on global climate change (Wall et al., 2007). Delegates should simply travel less, either internally or locally in a country or use non-fossil fuelled vehicles or public transport to move around. This would limit pollution of the environment through gas emissions, thus leading to sustainable development and preservation of the environment.

#### **5.2.6.3 Accommodation and travel choice**

Delegates to conferences and events should take more responsibility in terms of travel and accommodation bookings, rather than leave this to their institutional staff or to other external factors beyond their control. Delegates should advise those persons who are undertaking travel and accommodation arrangements to select green or fair trade establishments at conference destinations. Additionally, airlines with the least carbon footprints should be utilised.

#### **5.2.6.4 Publicity**

Green initiatives at events such as COP 17 should be widely publicised by the host city and country, event organiser and tourism organisations. At COP 17 most delegates were only aware of a few of the green initiatives. The researcher was aware of many other green initiatives undertaken at the conference but delegates were unaware of these which may be due in part to the lack of publicity. Another area that needs more publicity is conservation areas locally, regionally and nationally in South Africa. Very few delegates visited or planned to visit conservation areas in Durban, KwaZulu-Natal or South Africa. Tourism KwaZulu-Natal should work with event

organisers, tour operators and management of conservation areas to provide special packages for delegates at events such as COP 17 to encourage visits to these sites. Accommodation establishments can also engage in this initiative by offering tours to these conservation areas in addition to the accommodation. South African accommodation establishments should also publicise more widely their fair trade and green initiatives so that delegates to events are knowledgeable about these issues and can make informed choices when booking accommodation.

#### **5.2.6.5 Environmental education and the greening of events**

Residents of host cities are key role players in disseminating information and transferring knowledge on specific environmental initiatives as a result of their interaction with tourists. Thus, event organisers need to include local residents as potential vehicles to transfer knowledge of such initiatives. Disseminating information and hosting of education workshops for local residents prior to the event may result in increased awareness of specific environmental initiatives which may be transferred to tourist through various forms of interaction.

It is evident from research that the accommodation sector has been slow to implement environmental management programmes due in part to lacking knowledge and training and their disinclination to invest resources in this area (Doods, 2010; Sucheran, 2013). In this respect, hotel managers should be educated and trained to implement environmental management programmes. They should also train staff and educate visitors on environmental best practices. Prominent displays, brochures and booklets should be used to change the environmental behavioural practices of visitors. Environmentally conscious actions will change the ecological behaviour of tourists to act positively. Training of staff on green initiatives is also important as they interact with visitors and this information could be passed on. Schmied et al. (2007) are of the opinion that staff should be well-informed and motivated so that any environmental programme implemented by the accommodation establishment would succeed. The importance of promoting environmental education and awareness are also stressed by Bob and Naidoo (2012).

It is important to underscore that this study reveals that it is problematic to assume that COP attendees are environmentally aware and knowledgeable. Environmental education should be

promoted at all events, regardless of whether they have a thematic environmental focus or not. Thus, the greening of events needs to be integrated into all aspects of hosting events including planning and educational programmes.

#### **5.2.6.6 Monitoring and evaluating tourism impacts**

Various stakeholders such as local government and Tourism KwaZulu-Natal, together with accommodation and other stakeholders should set up joint structures to monitor and evaluate the impacts of tourism in terms of event tourism, sustainable tourism and sustainable development. This is urgently required for future changes in policy and the management of tourism at destination areas.

### **5.3 Concluding remarks**

Climate change and its future impacts has relevance in the context of event tourism and the impacts that delegates have through their accommodation and travel choices, and their environmental behaviour at destinations. However, there also needs to be a commitment by tourists to change their behaviour in different settings which are sites of consumer behaviour (Barr et al., 2011). According to Barr et al. (2010: 1234), there is a need to understand behavioural practices in time and space to assess whether any relationships exist in order to evaluate policies aimed at reducing carbon emissions to combat climate change.

Using diverse sources of literature on pro-environmental behaviour, the conceptualisation of the current research was placed within the behavioural change literature. It focused on the tourism attitudes, perceptions and behaviour of delegates at COP 17, a climate change conference. The conceptual framework formulated proposed that socio-psychological and demographic factors influence tourist behaviour. Behaviour either positive or negative, impacts on event tourism, sustainable development and eventually policy formulation and management regarding tourism. The present study indicates that there was some relationship between socio-demographic factors, knowledge and attitudes and environmental behaviour. The results were similar in some respects to some studies but differed from others. It is, therefore, clear that there are contrasting results on these issues and it also shows that assessing environmental behaviour is complex. It is also

apparent that behaviour is limited to certain contexts. Moreover, it should be noted that research on environmental behaviour cannot focus on single variables to assess their impacts because studies such as that conducted by Mensah (2012) have found various factors interact to influence attitudes and environmental responsible behaviour. Jackson (2004 cited in Miller et al., 2010) echoes similar views in terms of information alone not leading to awareness. However, from the present application of the socio-psychological models and theories, it is evident that they are useful in studies such as the present one which focused on the attitudes, perceptions and behaviour of respondents.

Sustainability can only be achieved when there is a balance between social, economic and environmental components (David, 2011). However, a component that needs to be considered is the attitudes of tourists at home and on vacation, highlighting the part played by the responsible practices of tourists to achieve sustainability. If tourists behave responsibly this could lead to sustainable tourism (Spenceley, 2008) but in reality this is not the case as tourist attitudes and behaviour differ as indicated by Budeanu (2007) who found that even though tourists may declare positive sustainable attitudes only a few took action.

The present study contributes to an understanding of tourist attitudes and behaviour at a major event and the way in which individuals, who were knowledgeable about environmental issues, behaved at a tourist destination. It dealt with a specific group of tourists and this could be one of the limitations of the study. Another limiting factor in terms of generalising from the present study is the non-probability, purposive sampling technique that was used. Future studies should consider a random sampling technique. Additionally, comparative studies could be undertaken of event tourists and visitors who are on vacation to assess whether their attitudes, perceptions and behaviour are similar or different using the same variables. Studies should also be extended to measure the carbon footprint of specific events and assess the impacts on sustainable development and sustainable tourism. Drawing attention to the limitations of this study does not in any way mean that this study results are not significant as it only focuses attention to future research that should that could be undertaken as highlighted by Prapannetivuth and Arttachariya (2008).

Finally, it is evident from this dissertation, that much can be learned about environmental responsible behaviour of delegates to MICE in specific contexts. In this dissertation delegates played a significant role in the responsible tourism debate and they have been used as a platform to advance the knowledge generated on the impacts of tourism on this issue. The interdisciplinary nature of the study, conceptualisation of the problem using socio-psychological theories on ERB, the research methodology utilised, the techniques of data analysis and evaluation have been innovative in comparison to previous studies which focus specifically on the tourist impacts on the environment. The result of this exercise has been the generation of invaluable conclusions and ideas for further research that have not been covered in this dissertation. Moreover, the dissertation contributes to addressing some gaps that have existed in the tourism geographical literature which, in the researchers opinion is the major contribution.

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## Appendix 1

### COP 17 Responsible Survey Questionnaire

Tourism KwaZulu-Natal conducts regular surveys amongst delegates who are attending a conference/convention in the province of KwaZulu-Natal. The purpose of this survey, which is being done in conjunction with Durban Tourism and the University of KwaZulu-Natal, is to determine the nature and extent of COP 17 delegates with regards to 'green' or responsible tourism issues, and to obtain information which we can use to improve our services and status in this regard. We would be most grateful if you would answer the following questions. ALL information you provide remains confidential.

**Date:** \_\_\_\_\_ **Ref:** \_\_\_\_\_ **Venue:** \_\_\_\_\_

**Fieldworker:** \_\_\_\_\_

DOMESTIC DELEGATE	INTERNATIONAL DELEGATE
City or home town:.....	Country:.....
Home Province:.....	City:.....

Are you an official delegate or civil society participant/delegate?

1. Official delegate	2. Civil society participant/delegate
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If an official delegate, did you or do you plan to attend any of the civil society events?

1.Yes	2. No	3. Don't know
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### **1. Accomodation and travel**

1.1. What type of accommodation facility are you using while attending the COP 17 event, and for how many nights?

Accomodation Type	Accomodation Name	Number of Nights
1.5 star hotel		
2.4 star hotel		
3.3 star hotel		
4.Budget hotel		
5.Guest house (i.e 4+ bedrooms)		
6.Bed and Breakfast		
7. Camping		
8. Backpacker hostel		
9.Staying with friends/family		
10. Other: specify		

1.2. If using an accommodation facility, are any of the following environmental best practices used?

	1.Yes	2.No	3.Don't know
1.Conserving water (e.g. reuse of towels)			
2.Recommending showering instead of bathing- providing ONLY showers, no baths			
3.Conserving electricity(e.g. lights that automatically go off, use of alternative energy sources)			
4.Use of LED bulbs throughout establishment			
5. Green building standards (use of natural lighting and cooling)			
6.Promoting green behavioural change/information on environmentally-friendly behaviour			
7.Use local labour			
8.Use 'green' products (cleaning, laundry, in hotel bathrooms etc)			
9. Other: Specify			

1.3. How important were environmental considerations in your choice of accommodation during the COP 17 event?

1.Very unimportant	2.Unimportant	3.Neutral	4.Important	5.Very important
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1.4. If using an accommodation facility, is it a fair trade establishment?

1.Yes	2.No	3. Don't know
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1.5. How far is your accommodation (including from home for locals) from where your venue for the activities you are attending are being held? \_\_\_\_\_ km

1.6. What is the main mode of transport used to travel from your place of accommodation (including home) to the venue where the activities are being held?

1.Private vehicle	2.Rental vehicle	3.Train	4.Bus	5.Taxi-cab
6.Mini-bus taxi	7.Walked	8.Bicycle	9. Other (specify)	

1.7. Do you intend to offset the carbon emission you have created during your travel?

1.Yes	2.No	3.Don't understand what 'carbon' emission is
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1.7.1. If yes, specify how : \_\_\_\_\_

1.8. Have you or do you plan to visit conservation areas (nature parks, game reserves, botanical gardens) in South Africa?

	While in the Durban area	While in KZN	While in South Africa
1.Yes			
2.No			
3.N/A or unsure			

## 2. COP 17 themes and impacts

2.1. Listed below are some of the key themes to be discussed at the 17<sup>th</sup> Conference of the Parties (COP 17 event). Rate your knowledge of the following themes using the following rating scale: 1 = poor, 2 = average and 3 = good. Please note that 0 is don't know/ don't understand the concept/issue.

1. Sustainable development in a changing climate	
2.Reduction of greenhouse gas emissions (e.g. carbon)	
3.Climate Change financing	
4.Governance, planning and policymaking in a changing climate	
5. Public engagement in a changing climate	
6.Monitoring climate change	
7.Disseminating information on changing climate	
8.Adapting to climate change	
9.Biodiversity conservation and ecosystem health in a changing climate	
10.Water resources for human consumption in a changing climate (e.g. clean drinking water)	
11.Renewable/alternate energy in a changing climate	
12. Climate change, conflict and security	

2.2 Please indicate the level of agreement with the following statements about the environmental impacts of COP 17.

	<b>1.Strongly Disagree</b>	<b>2.Disagree</b>	<b>3.Neutral</b>	<b>4.Agree</b>	<b>5.Strongly Agree</b>
1.High levels of energy consumption					
2.Air pollution increases					
3.Solid waste increases					
4.Areas are more polluted/lots of litter					
5.There is an overconsumption of water					
6.Noise pollution increases					
7.There is land loss/habitat degradation					
8.There is a loss of biodiversity					
9.People learn more about conservation and taking care of the environment					

2.3. Are you aware of the following green initiatives/programs during COP 17? If yes, to any of the below, rate the effectiveness where 1 = Not effective, 2 = Neutral and 3= Very effective

	<b>1.Yes</b>	<b>2.No</b>	<b>Rating of Effectivness</b>
1.Environmental volunteers			
2.Green passport			
3.Hosting a carbon neutral event			
4.Climate train			
5.Responsible accommodation campaign			
6.CEBA (community ecosystem-based adaption)			
7.Other: specify.....			

2.4. Are you aware of any other green initiatives/ programs taking place during COP 17?

1.Yes	2.No
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2.4.1. If yes, specify which programs/ green initiatives?

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### 3. Environmental behaviour of respondents

3.1. Which of the following environmentally-friendly practices do you personally undertake/participate in while at home?

	1. Never	2.Sometimes	3.Always
1.Recycling			
2. Reuse of water			
3.Water harvesting			
4.Reduction of consumption (buy less)			
5.Purchase green/ fair trade products			
6.Composting of home waste			
7.Use of alternative energy sources other than electricity			
8.Planting of trees/ vegetation			
9.Propper disposal of waste			
10.Use of public transport			

3.2. Which of the following environmentally-friendly practices do you personally undertake/participate in when travelling (including during COP 17)?

	1.Never	2.Sometimes	3.Always
1.Conserving water (e.g. reuse of towels)			
2.Use water sparingly and efficiently (e.g. drink tap water, shower not bath)			
3.Interact with locals and buy local goods and services			
4.Use establishments that make use of local services and products			
5.Use electricity efficiently (e.g. switch off lights, T.V, air conditioner when not in room)			
6.Purchase green/fair trade products			
7.Support green projects			
8.Donate to local charities instead of giving money to street children			
9.Use public transport such as buses and trains			
10.Dispose of rubbish carefully- reduce, recycle and reuse			
11.Other:specify			

**4. Visitor Profile**

4.1. Age group

1. 18-30 years	2. 31-40 years	3. 41-50 years	4. 51- 60 years	5. 60+ years
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4.2. Gender (NOTE)

1. Male	2. Female
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4.3. Highest educational level completed

1. No formal education	2.Primary completed (7yrs of schooling)
3.Secondary completed (>7yrs of schooling)	4.Certificate/diploma
5.Undergraduate degree	6.Postgraduate
7. Other: specify.....	

4.4. What is your monthly net income (after deduction of taxes and social security)  
\_\_\_\_\_ (specify currency **€/\$R**)

4.5 Would you be willing to participate in a post- event survey after COP 17?

1. Yes	2. No
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4.5.1. If yes, please provide your electronic mail (email) address.

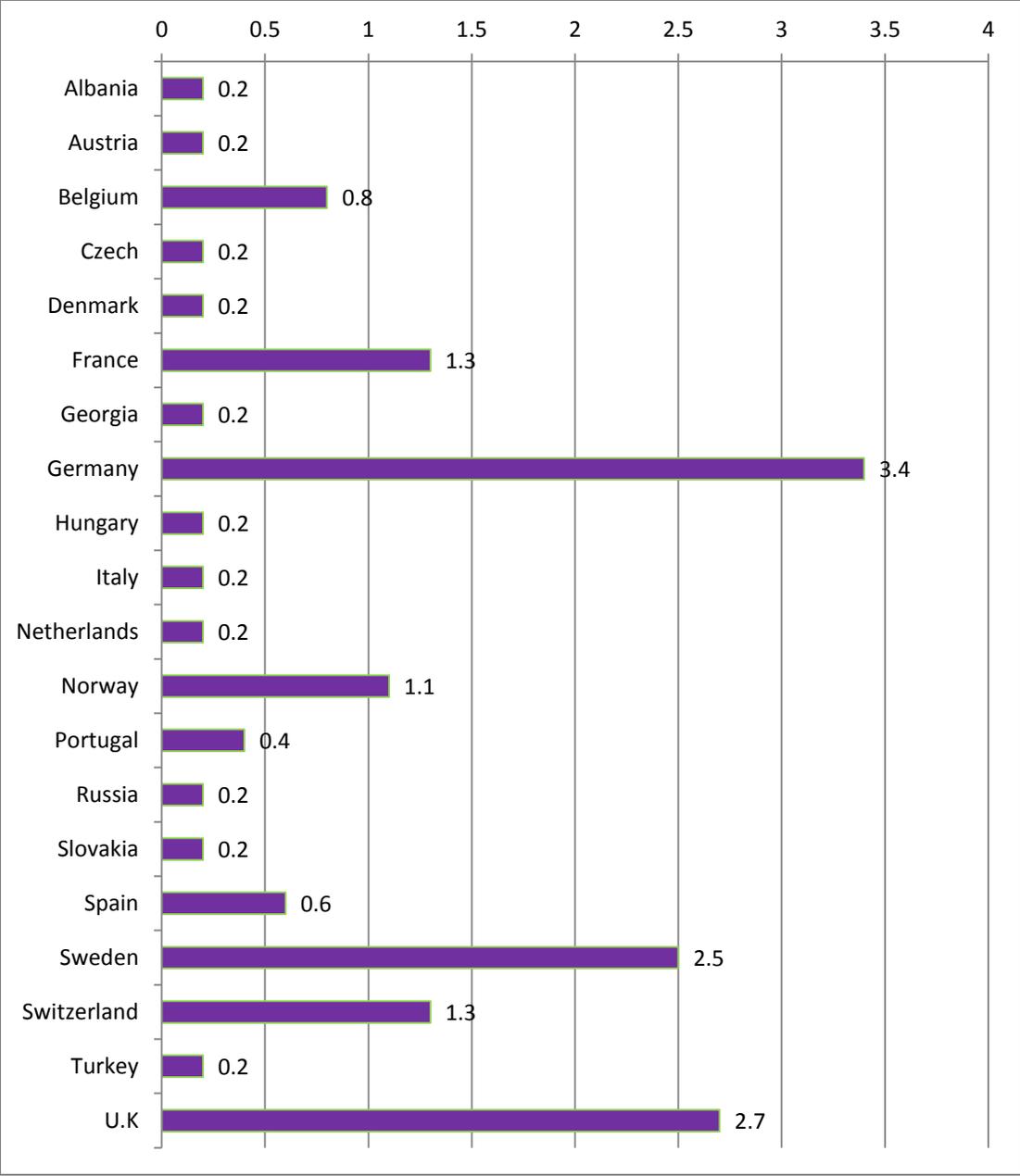
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5. General comments ..... ..... ..... .....
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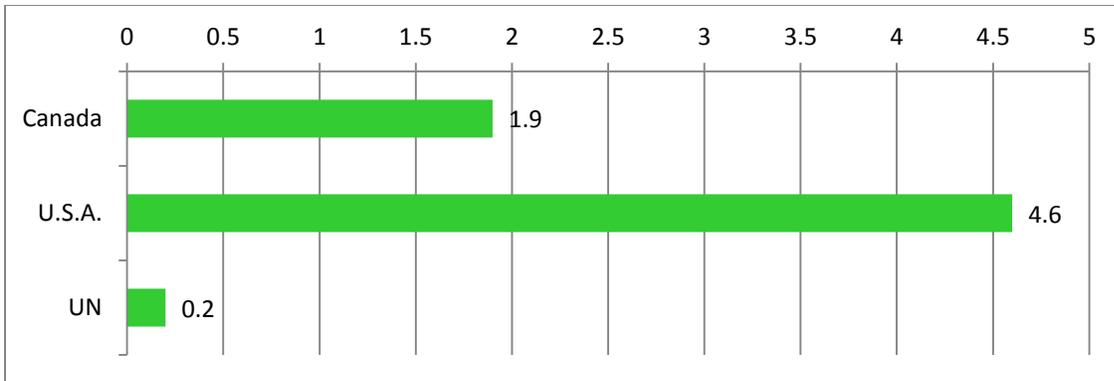
## **Appendix 2**

**Figures 1, 2, 3, 4, 5 and 6: Country of origin of international delegate (n=355) (%)**

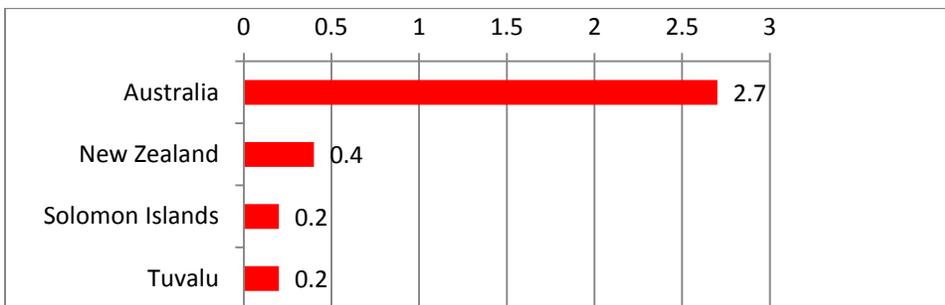
**Figure 1: Countries of origin in Europe**



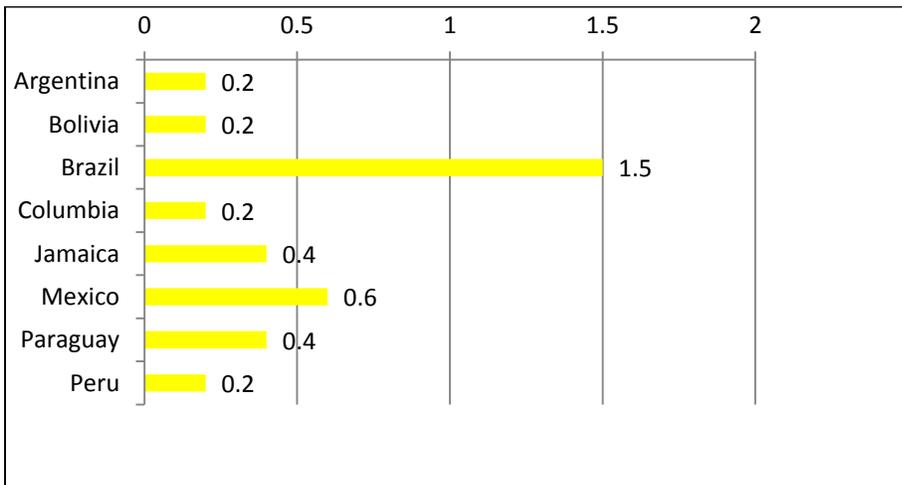
**Figure 2: Countries of origin in North America and members from UN**



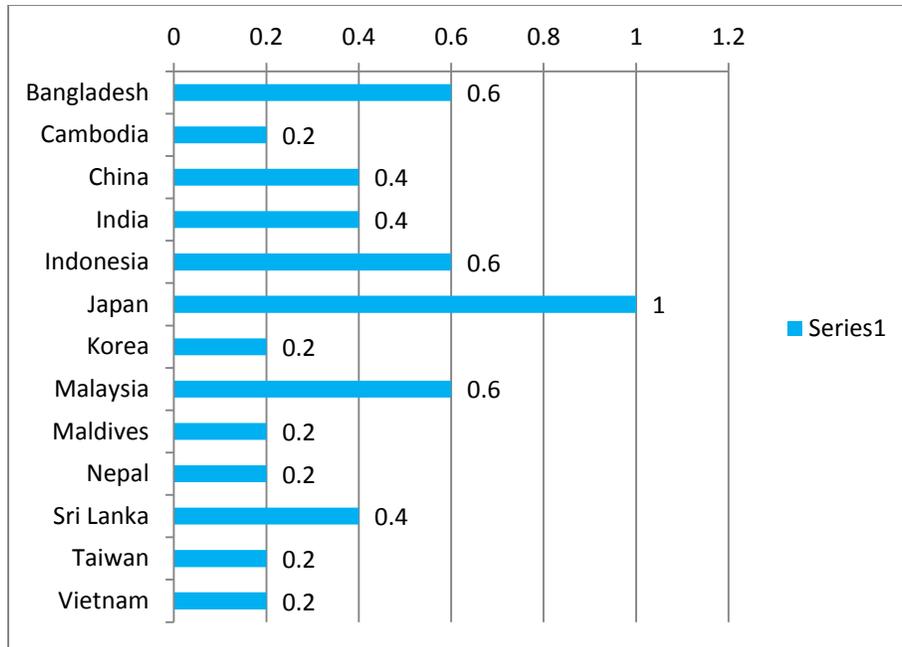
**Figure 3: Countries of origin in Australasia and Pacific Islands**



**Figure 4: Countries of origin in South America**



**Figure 5: Countries of origin in Asia**



**Figure 6: Countries of origin in Africa**

