

Wiebke Freund

Carbon offsetting as part of tourism operators' strategy to mitigate climate change

An analysis of attitudes, preferences and needs of tour operators based on a case study from Namibia

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Faculty of Economics and Faculty of Landscape Management and Nature Conservation
Master's programme "Sustainable Tourism Management"

Carbon offsetting as part of tourism operators' strategy to mitigate climate change

An analysis of attitudes, preferences and needs of tour operators
based on a case study from Namibia.

Thesis submitted in partial fulfilment of the
requirements for the degree of
"Master of Arts"

Submitted by: Wiebke Freund

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Abstract

This study is undertaken with the background that tourism is an active contributor to the man-made climate change and is also vulnerable to impacts of climate change. Apart from climate adaptation measures, the tourism industry needs to develop mitigation strategies to reduce its greenhouse gas emissions. Tour operators play the key role in climate protection measures in the tourism industry but may also face significant challenges due to climate change. This paper focuses on carbon offsetting as one tool of tour operators' climate protection activities. Besides a literature analysis, empirical data was collected through qualitative interviews for this study. Two different surveys were undertaken: one with international tour operators that are already active in climate protection and one with tour operators in Namibia. The interviewed companies all used carbon offsetting by either managing an own project to compensate emissions or by cooperating with an offsetting agency. The choice seemed to be founded in each company's capacity and resources as well as in their basic philosophy. Forestry projects as self-managed offsetting projects were clearly preferred. It was identified that pivotal factors for choosing forestry projects were accessibility for travel groups, tangibility for communication purposes and social benefits for local communities. Several companies indicated growing customer satisfaction or believed their climate commitment would positively influence their bookings. These outcomes were independently of the type of offsetting project the tour operators supported. The study further revealed that general factors for success in climate mitigation are not related to the size of a company, but rather its general commitment to sustainability, a strategic carbon management plan and transparent and comprehensive communication.

The second part of the paper comprises a case study from Namibia in which tour operators' current awareness and perception of climate change are analysed. Additionally, tour operators' knowledge and attitude towards carbon offsetting are studied. This study showed that tour operators were overall aware of potential threats for the tourism development in Namibia and considered climate change to become increasingly important in the future for the tourism industry. However, climate protection was not yet a high priority for the companies and only minor steps were taken to reduce carbon emissions. A strong interest in the concept of carbon offsetting was identified as well as the tour operators' preference in offsetting projects that take place in Namibia and, besides saving GHG emissions, also contribute to poverty alleviation.

German Abstract - Zusammenfassung

Tourismus verursacht Treibhausgase, die zum anthropogen verstärkten Klimawandel beitragen. Gleichzeitig ist die Tourismusindustrie jedoch auch von den Auswirkungen des Klimawandels betroffen. Die Entwicklung von Klimaschutzmaßnahmen im Tourismus zur Reduzierung von Treibhausgasen ist notwendig, zusätzlich zu Maßnahmen zur Anpassung an den Klimawandel. Reiseveranstalter spielen eine Schlüsselrolle bei den Herausforderungen des Klimaschutzes im Tourismus. Die vorliegende Arbeit konzentriert sich auf die Kompensation von Treibhausgasen als eine mögliche Klimaschutzmaßnahme von Reiseveranstaltern. Für diese Studie wurden neben der Auswertung von Sekundärliteratur empirische Daten durch qualitative Interviews gesammelt. Zwei verschiedene Untersuchungen wurden durchgeführt: eine mit internationalen Reiseveranstaltern die bereits im Klimaschutz aktiv sind und eine zweite mit Reiseveranstaltern in Namibia. Ziel des ersten Teils der Studie war es, die Vorteile und Wirkungen verschiedener Möglichkeiten der Treibhausgas-Kompensation herauszufinden, die Reiseveranstalter einsetzen können. Alle der interviewten Unternehmen nutzten dazu entweder eigene Projekte oder kooperierten mit einer Klimaschutzorganisation. Die Faktoren, die die jeweilige Wahl bestimmten, schienen sowohl die vorhandenen Ressourcen innerhalb der Firmen in Bezug auf Personal und Fähigkeiten als auch die Unternehmensphilosophie zu sein. Bei den eigenen Projekten wurden Aufforstungs- oder Waldschutzaktivitäten deutlich bevorzugt. Als ausschlaggebende Faktoren erwiesen sich bei diesen Projekten, dass diese den Kunden anschaulich nahe gebracht und von den Reisegruppen besucht werden können. Einige der Reiseveranstalter nannten unabhängig von der Art des Kompensationsprojektes positive Auswirkungen ihrer Klimaschutzaktivitäten. Sie beobachteten beispielsweise eine höhere Kundenzufriedenheit oder nahmen an, dass ihre Klimaschutzaktivitäten die Buchungszahlen steigen ließen. Die Studie ergab, dass eine nachhaltige Gesamtausrichtung des Unternehmens, gezieltes Klimaschutzmanagement und -marketing wichtiger sind für die Steigerung der Zahlungsbereitschaft als die Größe des Unternehmens oder die Art des Kompensationsprojektes.

In einer Fallstudie, in der Reiseveranstalter aus Namibia interviewt wurden, zeigte sich, dass die Auswirkungen des Klimawandels und potentiellen Gefahren für den Tourismus in Namibia nur partiell und nicht allen Unternehmen bewusst sind. Obwohl die Reiseveranstalter annehmen, dass der Klimawandel in Zukunft auch im Tourismussektor eine größere Rolle spielen wird, haben Klimaschutzmaßnahmen bisher noch keine hohe Priorität für sie. Trotzdem scheinen die Unternehmen sehr interessiert an Kompensationsprojekten zu sein, sofern diese vor Ort stattfinden und neben der Einsparung von Treibhausgasen auch zur Armutsbekämpfung beitragen.

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Wiebke Freund

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List of Acronyms and Abbreviations

AAP	African Adaptation Project
BBEE	Broad Based Black Economic Empowerment (Namibia)
CACP	Climate Action Certification Program (Australia)
CBNRM	Namibia's Community Based Natural Resource Management Programme
CBT	Community-Based Tourism
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO ₂	Carbon Dioxide
CSR	Corporate Social Responsibility
DoT	Directorate of Tourism (Republic of Namibia)
EU	European Union
FENATA	Federation of Namibian Tourism Associations
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GS	Gold Standard
HAN	Hospitality Association of Namibia
HDI	Human Developing Index
IATA	International Air Transport Association
IISD	International Institute for Sustainable Development
IPCC	Intergovernmental Panel on Climate Change
IRTS	International Recommendations for Tourism Statistics
JV	Joint Venture
MDG	Millennium Development Goals
MET	Ministry of Environment and Tourism (Republic of Namibia)
NACOBTA	Namibian Community Based Tourism Association
NACSO	Namibia's Communal Conservancy Tourism Sector
NCCC	National Climate Change Committee (Republic of Namibia)
NGO	Non-Governmental Organization
NNF	Namibia Nature Foundation
NPC	National Planning Commission (Republic of Namibia)
NTB	Namibia Tourism Board
ppm	Parts Per Million
PV	Photovoltaic
RTEA	Rapid Trade and Environmental Assessment
STA	Sustainable Tourism Australia
TASA	Tour and Safari Association of Namibia
TICOS	Tourism Industry Carbon Offset Service
TNN	Travel News Namibia
UN DESA	United Nations Department of Economic and Social Affairs
UN	United Nations
UNDP	United Nations Developing Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNSTATS	United Nations Statistics Division
UNWTO	United Nations World Tourism Organization
USP	Unique Selling Point
VCM	Voluntary Carbon Market
VER	Voluntary / Verified Emission Reduction
WTTC	World Travel and Tourism Council
WWF	World Wide Fund for Nature

1. Introduction

1.1 Background

Climate change is now commonly acknowledged to present the major challenge of this century¹. According to the Intergovernmental Panel of Climate Change (IPCC), the last 50 year's global warming is "very likely" to be an effect of greenhouse gas (GHG) emissions resulting from human activities (IPCC, 2007). By 2030, the emissions of the six key GHG² are expected to have increased by 25 to 90% compared to 2000, if no actions are being taken (UN, 2011). To reduce the emissions and eventually stabilize the level of GHG in the atmosphere, policies need to be put in place and mitigation measures need to be adopted (IPPC, 2007; UN, 2011).

The tourism industry's contribution to climate change is estimated to amount to 5% of to the global GHG emissions (UNWTO & UNEP, 2008). The transportation and especially the aviation sector account for the largest part of the emissions (e.g. Scott et al., 2010; Becken, 2008). As this segment is expected to continue to rapidly grow, also the share of tourism's emissions will likely enlarge (UNWTO, 2009). In regard to climate change, the tourism industry does not only contribute to it, but is also directly and indirectly affected by the consequences of a changing climate (e.g. UNWTO, 2009; Strasdas, 2010; Gössling, 2011; Davidson, 2009; Becken 2004; respect, 2009; Yang, 2010). This is due to the fact that most types of tourism are very sensitive to changing climate conditions, extreme weather events (Gössling et al., 2010; Becken & Hay, 2007) and are dependent on natural resources and an intact nature, namely landscape, biodiversity and wildlife or simply in relation to clean water supply (UNWTO, 2009).

Even if existent, as governmental policies and regulations aiming to reduce GHG reduction are often implemented rather slowly, tourism companies may want to step ahead and be proactive in that field (cf. Boon et al., 2008). Despite a number of advantages of pro-active initiatives, mitigation measures in tourism are still only adopted by a small (but growing) percentage of companies (Abegg, 2011, Kollmuss et al., 2008; Chiesa & Gautam, 2009). Apart from environmental motivation, economical reasons suggest that the tourism industry should reduce emissions that cause climate change, for instance reducing costs by saving energy, in becoming more competitive by enhancing a company's reputation or by meeting or exceeding the customers' sustainable expectations (Scott & Becken, 2010; Gössling, 2011). Recent studies confirm that an increasing number of travellers are aware of tourism's contribution to global warming and expect companies to take responsibility and engage in climate protection (Wehrli et al., 2011; UNWTO,

¹ See among others Conrady & Balkan, 2008; WWF, 2009; Schott et al., 2010; Scott & Becken, 2010

² The six greenhouse gases (GHG) are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), Perfluorocarbons (PFCs) and Hydrofluorocarbons (HFCs). (Source: UNFCCC, 2009)

2009; Davidson, 2009; Zotz, 2010; Gössling, 2011). This attitude also slowly alters the tourists' booking decisions (ABTA, 2011; Poser, 2011) and thus plays an increasing role in the development of new "greener" products and marketing activities. It can be assumed that climate protection will become a distinctive mark of a tourism product or company in the competitive tourism market (e.g. Strasdas, 2010; Gössling, 2011, Davidson, 2009; UNEP, 2011). The climate protection projects of tour operators that are already active in this field will be presented in chapter 4 of this thesis and the motivations and environmental and marketing effects of the projects discussed.

To meet customer expectations in terms of mitigating climate change and reducing GHG emissions, there are possibilities for accommodation providers to employ as primary steps e.g. to use renewable energies or increase the facilities' energy efficiency. Tour operators, in contrast, have these options limited only to their office buildings. Moreover, tour operators are dealing most closely with the travellers during the booking process and thus have to cope with their clients' preferences on environmental performance and their spending pattern, which does not necessarily correspond to their expectations (UNWTO & UNEP, 2008; Zotz, 2010; Wehrli et al., 2011). For GHG emissions that can neither be avoided nor reduced, voluntary carbon offsetting can be found as one option for tour operators to mitigate their impacts on climate change (e.g. Gössling et al., 2007; Strasdas, 2007; Boon et al., 2008).

In recent years, carbon offsetting and tourism has been thoroughly discussed in literature³. Nevertheless, a lack of literature was found in relation to the motivation of tour operators and the effects of different offsetting projects on e.g. customer satisfaction and sales (cf. Zotz, 2010). This topic has also not been thoroughly studied with regard to awareness and preferences of tourism stakeholders in developing countries (cf. Scott & Becken, 2010). The thesis at hand aims to provide a contribution to filling this gap. After a brief analysis of the tourism industry's interrelations with climate change, this thesis offers a comparative overview of tour operators' opportunities to mitigate climate change, including climate protection examples with an emphasis on different carbon offsetting projects. Besides shedding light on exemplary climate protection initiatives that are already being implemented, a case study within this thesis will elucidate the tour operators' current relation to climate change in a Namibia.

Developing countries like Namibia are most vulnerable to climate change as these countries will be impacted dramatically by the consequences of a changing climate and have little financial and technological resources for mitigation and adaptation measures (cf. IPCC, 2007; Jones et al, 2009; Kadel et al., 2009; UNWTO, 2009). Nevertheless, Namibia's tourism industry being one of the country's most important economies (e.g. MET, 2008; Jones et al., 2009) is not only affected by

³ see among others: Becken, 2004; Eijgelaar, 2009; Gössling et al., 2007; Mair, 2010; Strasdas, 2010; Zotz, 2010; Boon et al, 2008; Gössling, 2011.

climate change, but is also causing GHG emissions itself - thus exacerbating the issue. This is primarily because Namibia is a long-haul destination for its major source markets and additionally, long distances within the country are generally travelled by either car or air-craft (Strasdas, 2011). Growing environmental awareness and rising flight prices as indirect impacts of climate change could result in the future into fewer long-haul flights, thus reducing emissions and therefore minimizing the impact of harmful effects (Brouwer et al., 2008). It needs to be taken into consideration, however, that cutting back on emissions in aviation is therefore likely to go hand in hand with fewer tourist arrivals (UNWTO, 2009). In developing countries like Namibia that are depending on tourism to bring foreign income and driving its economic growth (Jones et al., 2009; UNWTO, 2009; MET, 2010), a decrease in tourism could have major impacts on its gross domestic product and lead to an overall increase of poverty (cf. Conrady & Bakan, 2008, UNWTO, 2009). Carbon offsetting, as a tool to mitigate climate change in tourism, addresses this critical issue and aims to display a way to compensate the negative sides of flying with funding projects that help to reduce emissions and also generate positive, sustainable social benefits. So far, climate change and mitigation strategies have not been in the focus among Namibia's tourism stakeholders (Strasdas, 2011). The case study presented in chapter five will concentrate on this topic with an analysis of climate change awareness and attitudes of tour operators in Namibia. Furthermore, general interest and possible preferences in climate mitigation measures of Namibian companies are being studied.

1.2 Objectives and Research Purpose

The main objective of this master's thesis is to investigate tour operators' motivation, attitudes and preferences regarding climate protection measures. This paper also provides a brief overview of existing literature on tourism and mitigation strategies. To address the main research topic, the paper is divided into two main parts:

1. Example based discussion of mitigation practices from international tour operators
2. A survey on tour operators in Namibia - as an example for developing countries that highly depend on nature-based tourism and long-haul travel.

The purpose of the first section is to provide a comparative overview of present climate protection opportunities and carbon offsetting projects already implemented by a range of tour operators. This paper will also illustrate the effects of different types of offsetting projects and implementation practices on the company and its customers are being discussed.

In the second part, the focus is on the Namibian tourism industry with specific questions: What is the perception of climate change among tour operators in Namibia? Are tour operators aware of the

vulnerability of Namibia's tourism in regard of climate change⁴? Does any interest exist in mitigating climate change and which preferences and needs do tour operators have in this respect? The final question to be answered is what type of carbon compensation projects should be developed to meet climate protection goals as well as attract tourism stakeholders to participate and motivate tourists to offset their carbon emissions and therefore help sponsoring the project.

A detailed set of research questions can be found in chapter 2.6, at the end of the literature review. Hypotheses and research questions for the case study are stated at the beginning of the case study, as they have been defined by taking the results of the first study, chapter 4, into consideration.

1.3 Methodology Outline

After defining the study's objectives, a methodology framework for the data generation, analysis and case studies was defined, as detailed later in chapter 3. For the process of this qualitative study, eight working steps have been drawn up. Table 1 illustrates the chronology of the working steps and their objectives:⁵

Table 1 - Working steps of the research process

Working Step		Objective
1	Introduction to the topic	Primary familiarization with climate change, tourism and the role of tour operators in that relationship
2	Defining research objectives and methodology	Determining the thesis' goals, purpose and research approach
3	Literature review	Clarifying today's scientific knowledge on the interrelations of climate change and tourism, and examining the tourism industry's potential mitigation measures
4	Specifying and formulating research questions	Gaining a more defined set of actual questions for the study
5	Survey preparations	Obtaining interview guidelines and a selection of interview partners
6	Data collection	Receiving primary data to answer the research questions
7	Interpretation and discussion	Answering the first set of research questions, and comparing of climate protection activities of tour operators Case study: discussing the survey results and examine the hypothesis
8	Conclusion and textualisation of the research	Presenting the research in the form of a thesis report

⁴ The vulnerability of Namibia's tourism industry has been discussed among others in: MET, 2010; Reid, 2007; Strasdas, 2011; Davidson, 2009

⁵ Based on Diekmann, 2007.

To begin with, a secondary literature review was undertaken primarily for the background chapter on climate change and tourism as well as for the country introduction of Namibia within the case study. Academics as well as popular publications dealing with the subjects have been reviewed.

For a deeper analysis with primary sources and own data, a qualitative research approach was chosen with expert interviews being the central source of primary data. In consideration of the relative small number of tour operators being already active in climate protection, compared to the total amount of tour operators worldwide, the qualitative approach seemed more applicable to investigate the research questions. For both, the comparative overview of tour operators' climate engagement as well as the case study, the qualitative approach has the advantage to gain deeper insight and present the results in a descriptive respectively explorative manner with due regard to the specific contexts of the different parts of this study (cf. Hesse-Biber & Leavy, 2011; Finn et al., 2000).

The method of including a case study⁶ into the thesis was chosen to comprehensively investigate the topic extensively for one specific destination. The outcomes of the case study should be transferable to a certain extent to similar countries or destinations. Primary data was gathered through in-depth face-to-face interviews with inbound tour operators in Namibia.

Over the course of the research, the original methodology needed to be partially adapted, since it emerged that several of the international tour operators preferred completing a questionnaire instead of being available for a phone interview. That was eventually the case of 4 out of 10 "interviews". For the case study, one company was surveyed with a questionnaire, since no interview could be scheduled, while the remaining 15 companies were interviewed face-to-face

1.4 Report Structure

After a general foreword, this paper starts in chapter two with a brief introduction of climate change and anthropogenic warming and focuses then on the interrelations between tourism and climate change and mitigation options. At the end of this chapter, the defined research questions are being specified, before the empirical methodology is described in chapter three. Thereafter, in chapter four, climate protection activities of several tour operators and its effects are being presented and discussed. The following section of the thesis deals with the case study, which firstly presents the hypotheses that are developed by taking the previous chapter's results into consideration. The chapter then briefly introduces Namibia and its tourism situation, before the

⁶ A case study can be described as an "expansive field within the qualitative paradigm. Case study is a research strategy or a process of inquiring, as well as the result of inquiry" (Hesse-Biber & Leavy, 2011:275).

empirical research is being unveiled and discussed. Finally in chapter 6, the results of both parts of this study are being discussed and conclusions are drawn.

The summarized transcriptions of the interviews conducted with tour operators as well as the completed questionnaires can be found in the appendix.

2. Tourism and Climate Change

This chapter provides a brief introduction to the basics of climate change, prior to shedding light on the interrelations of climate change and tourism. An overview of mitigation measures will be given with the focus on voluntary carbon offsetting. The literature review will continue with a section about travellers' awareness on climate change, and will conclude with a defined set of research questions.

2.1 Climate Change Background

2.1.1 State of Knowledge

Climate is generally defined as the “long term average weather condition of a large area of the earth’s surface” measured over a rather long period of time, compared to weather which is the “state of the atmosphere at a given time” (Mfune et al., 2009:14). Notwithstanding individual weather events, natural processes can also cause climate variability within a climate system (IPCC, 2007). It is nowadays commonly agreed by international scientists, however, that anthropogenic activities that release greenhouse gases (GHG)⁷ contribute and accelerate climate variability respectively the change of climate (e.g. IPCC, 2007; Ehmer & Heymann, 2008; Scott, 2011; Gössling, 2011). The term “climate change” describes a “change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” (UNFCCC, 1992:3). Burning fossil fuels is commonly regarded as the main contributor to climate change (SOURCE). Since pre-industrial times, the concentration of carbon dioxide in the atmosphere, the gas contributing most to the greenhouse effect, has continuously risen with an enlargement of 70% between the years of 1970 and 2004 (IPCC, 2007; UNFCCC, 2009).

⁷ “Greenhouse gases” are defined as “those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation” (UNFCCC, 1992:3).

Although globally a warming trend in the climate has been observed for decades there is still uncertainty to the prediction of future climate scenarios. This is because of the high complexity of variables and interaction in the climate system and it seems difficult to predict the precise effects of a changing climate in specific areas, despite ongoing improvements in climate change sciences (e.g. IPCC, 2007; Mfunne et al., 2009; MET, 2010). In order to prevent the planet from suffering dangerous and irreversible damage caused by crossing the “climate change tipping points” which scientists expect by a global temperature increase of over 2.0 to 2.4°C⁸ (IPCC, 2007), researchers have warned policy makers that the CO₂ concentration in the atmosphere must not increase beyond levels expected by 2015 (Kollmuss et al., 2008). IPCC scientists stress that even stabilizing GHG levels in the atmosphere of 445 to 490 ppm, a major reduction of anthropogenic GHG emissions of 50-85% by 2050⁹ is urgently required (Bullock et al., 2009, UN, 2011) and warn that climate impacts might exceed yet the most pessimistic scenarios expected, including sea-level rise, severe flooding, more weather extremes and changes in weather pattern leading to water scarcity and risk for hunger concerning potentially billions of people (e.g. UNEP, 2004; Brouwer et al., 2008; Bullocks et al., 2009; WWF, 2009). According to the last available assessment report by the IPCC of 2007, current mitigation policies and climate protection practices are with “much evidence” not sufficient and do not alter the continuous grow of global GHG emissions over the next decades (IPCC, 2007; Schott et al., 2010). It is commonly acknowledged that the level of global temperature increase in the future strongly depends on the path chosen to deal with emissions and the adoption of much needed measures to limit GHG emissions in the upcoming decades (e.g. Scott et al., 2010). Some of the impacts of climate change can already be witnessed, as a change in intensity and frequency was observed, regarding extreme weather events over the last decades (IPCC, 2007). It is deemed very likely that the frequency of precipitation has changed and heat waves have become more numerous (IPCC, 2007). The following graph (see figure 1) from the International Strategy for Disaster Reduction, shows that the occurrence of all natural catastrophes increased exponentially in the last 40 years. Hydro-meteorological, i.e. climate-related disasters, such as floods, draughts and hurricanes, however, present a far larger increase in numbers than other natural disaster (UNISDR, 2006).

⁸ Compared to the pre-industrial level (IPCC, 2007)

⁹ Of levels of atmospheric GHG in 2000, to compare, the GHG levels in 2005 amounted to 379 ppm (IPCC, 2007; UN, 2011).

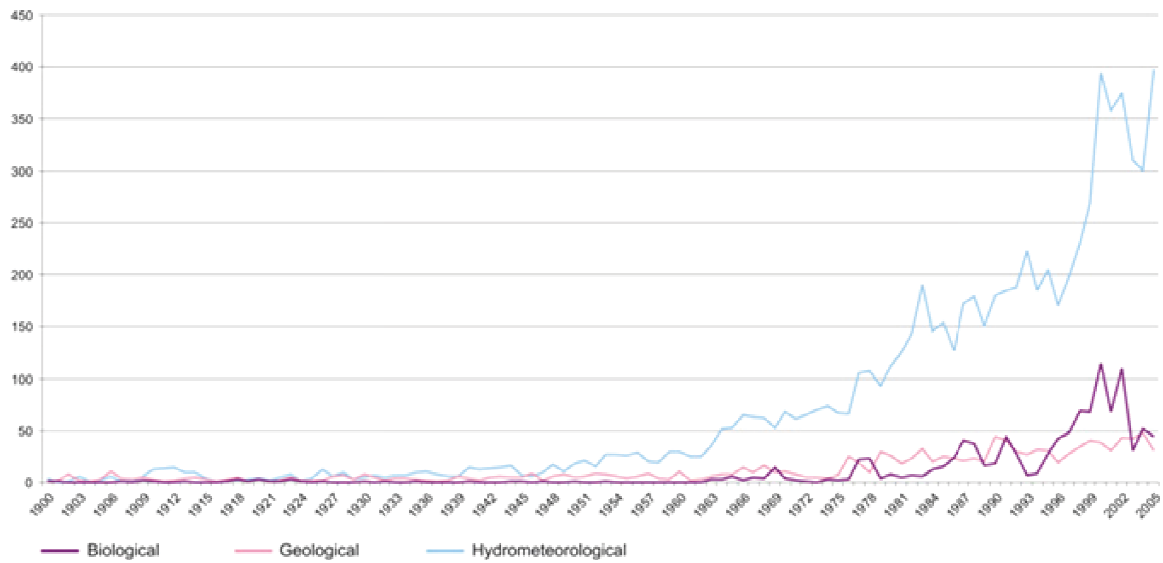


Figure 1 - Number of natural disasters registered in EMDAT ¹⁰- 1900 to 2005 (Source: UNISDR, 2006)

It has also been observed that not only the frequency, but also the structure of global precipitation and draughts has changed. While northern regions become more humid, the subtropical areas are recognized to become even dryer (e.g. Conrady & Bakan, 2008). Additionally, due to higher global temperatures, regular draughts are expected to be of longer duration and become more intense (Mfune et al., 2009).

2.1.2 Market Mechanism of Carbon Trading

More than 130 countries have until today approved climate protection policies that seek to limit temperature increase to maximal 2°C in comparison to pre-industrial levels. With the help of these policies, risks of severe impacts should at least be decreased as it seems unlikely to evade all expected impacts (Schott et al., 2010). The first international agreement to tackle climate change, the Kyoto Protocol was signed in 1997 by 37 industrialized countries who agreed with binding targets to cut GHG emissions (Bullocks et al., 2009; UNFCCC, 1998). Within the Kyoto Protocol that is linked to the UN Framework Convention on Climate Change (UNFCCC), the first steps for an emission trading system between countries were established, combined with the clean development fund that aims to support developing countries to adopt a sustainable and low-emissions developing path (IPCC, 2007; MET, 2010). The ultimate objectives of the UNFCCC is the “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”, while this level should be reached within a time-frame that is “sufficient to allow ecosystems to adapt naturally to climate change, to

¹⁰ “EM-DAT is a global database on natural and technological disasters that contains essential core data on the occurrence and effects. EM-DAT is maintained by the Centre for Research on the Epidemiology of Disasters at the School of Public Health of the Université catholique de Louvain located in Brussels, Belgium.” (Source: <http://www.emdat.be>)

ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner” (Source: UNFCCC, 1992:4).

Under the principle of “common but differentiated responsibilities”, the emission reduction targets are primarily to be met by the developed countries that are predominately responsible for the high concentration of the GHG currently in the atmosphere (UNFCCC, 1998).

In addition to national measures to achieve the reduction targets, the participating countries also have the chance to trade emissions allowances with other countries, using the three different market-based mechanism that are included in the Kyoto Protocol:

- Emission trading (carbon market)
- Clean Development Mechanism (CDM)
- Joint Implementation (JI)

The established cap-and-trade system imposes limits to the national greenhouse gas emissions of developed countries. Corresponding to the assigned emission targets, each country is eligible to a certain number of allowances (e.g. Kollmuss et al., 2008). At the “carbon market”, countries are allowed to trade these GHG emission rights, such as the EU member states within the EU Emission Trading System (ETS). In addition, the CDM helps developed countries that have ratified the Kyoto Protocol, so called Annex I¹¹ countries, in complying with their reduction targets by permitting them to finance emission reduction projects in developing countries (e.g. UNFCCC, 1998; UNEP, 2004; MET, 2010). The CDM’s intension is to promote sustainable development and provide benefits such as technology transfers for the hosting countries (Bullock et al., as developing nations have typically e.g. lower energy efficiencies or less advanced technologies (UNEP, 2004). Each CDM project generates Certified Emission Reductions (CERs) that can be sold to Annex I parties. Compared to the CDM, the difference of the Joint Implementation (JI) is that another Annex I country hosts the project and not a developing nation (IPCC, 2007).

The idea behind all three mechanisms implies that it is not relevant for the global climate where on the planet GHG emissions are reduced or emitted. The so called “flexible mechanisms” therefore enable countries to lower their costs to reduce emissions by taking the opportunity to remove emissions in other countries where the same amount of emissions can be avoided more cost-efficiently (e.g. Kollmuss et al., 2008; Bulluck et al., 2009; UNFCCC, 2011).

Even though the mechanism mentioned here are expected to play an important part in future climate protection measures (WWF, 2009), critics of the Kyoto Protocol and its following climate conventions argue that the current emission reductions are merely “voluntary pledges by individual

¹¹ Countries that are listed in Annex I to the UN Framework Convention on Climate Change: Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, European Union, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America

countries". Schott et al. (2010) further suggest that the emission targets should become legally binding agreements under an UN framework, in order to be sufficient to reach the cutbacks in emission that are needed to limit global warming to 2°C UN (Schott et al., 2010).

Outside of the compliance market where CERs are traded, a voluntary market for emission reductions, so called carbon offsets, exists (see fig. 2). On the voluntary market, either CERs e.g. from CDM projects, or Verified or Voluntary Emission Reductions (VERs) can be purchased not only by governments, but also by businesses, NGOs and individuals that are willing to offset their emissions (e.g. Kollmuss et al., 2008).

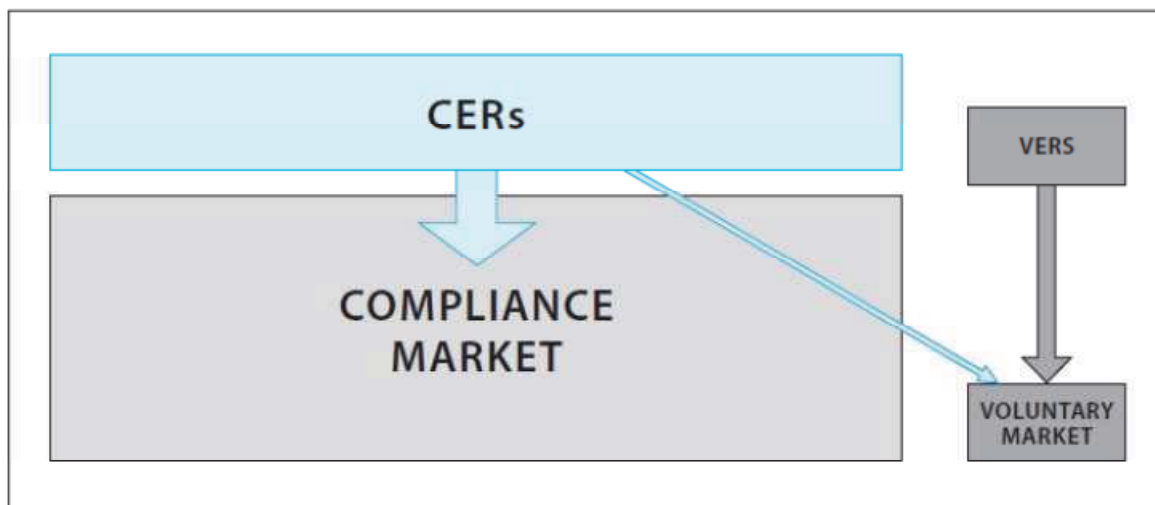


Figure 2 - Carbon Offsets in the Compliance and in the Voluntary Market. (Source: Kollmuss et al., 2008:6)

As illustrated in figure 2, the size of the voluntary market is much smaller than the trading volume of the compliance market, as the demand of carbon offsets relies entirely on voluntary purchases (Kollmuss et al., 2008). The role that the voluntary market plays in the tourism industry will be outlined in chapter 2.4.

2.2 Interrelations of Climate Change and Tourism

Over the last decade, the impact of tourism on climate change, as well as the impacts of climate change on tourism have been widely researched and discussed in literature, along with potential mitigation strategies such as carbon offsetting (cf. e.g. Becken & Hay, 2007; Eijgelaar, 2007; Conrady & Bakan, 2008; Schott et al., 2010, Scott et al., 2010; Gössling, 2011; Strasdass, 2011). For the sake of breadth, this thesis will offer a very brief literature review on this topic. Obviously, there are many ways in which tourism contributes directly or indirectly to climate change, just as there are many ways in which a changing climate forces tourism to adapt. Some of these interrelations are described in detail in the main chapters four and , particularly dealing with two

topics less frequently discussed in literature: first, the tour operators' current mitigation measures and second Namibia's tour operators' awareness of climate change.

Given that the climate and the environment are two key resources of tourism¹², this sector is considered highly sensitive to the impacts of a changing climate, (UNWTO, 2007a; Yang, 2010), similar to agriculture. Tourism stakeholders also recognize the “two-way interaction” between climate change and tourism (Zotz, 2010). According to McKercher et al. (2010) there is little doubt nowadays that tourism is not only the victim of climate change but also a culprit. In fact, tourism has been identified as a major source of GHG emissions, due to its energy-intensive activities (e.g. IPCC, 2007; Gössling, 2011). Current research estimates that the tourism sector's contribution to the global anthropogenic climate impact amounts to about 5% (UNWTO, 2007a; UNWT, 2009; UNEP, 2011), 4% to 9% (Zotz, 2010) respectively even 5% to 12% (Scott et al., 2010). Tourism has even been found to be one of the fastest increasing sources of GHG emissions (Dubois & Ceron, 2008; Mair, 2011). There is consensus that by far the largest part of GHG emissions caused by tourism is generated by air travel (e.g. Gössling et al., 2007; UNWTO & UNEP 2008; Scott et al., 2010) as specified later on in this chapter.

In 2007 the UNWTO adopted the Davos Declaration¹³ which clearly acknowledged the link between tourism and climate change and tourism's significant contribution to global warming (UNWTO, 2007a). Meanwhile it has become a general consensus within the industry that a long term strategy is needed for the tourism sector in order to contribute to global reduction efforts of GHG emissions (UNWTO, 2007a; Scott et al., 2010). Nevertheless, Scott (2011) points out that the tourism sector is least prepared for the challenges and chances of climate change compared to other industries and only recently started to show visible interest in climate change and accumulate the knowledge and the capacity to address this issue (cf. Conrady & Balkan, 2008). It is expected that climate change is likely to “become an increasingly pivotal issue affecting tourism development and management” (Yang, 2010:212).

To calculate both tourism's climate-risks and emission contribution in the future, development trends in tourism need to be taken into consideration. Domestic and international tourism are growing rapidly (e.g. Scott et al., 2010; ITB, 2010). International tourist arrivals have more than tripled in the last three decades from 300 million in 1980 to 922 million in 2008 (UNWTO, 2009). The global economic crisis in 2009 temporarily dented this growth trend, but as early as 2010, the trend in world travel has turned upwards again and is expected to be “back on the growth path”

¹² The term “tourism” is defined as “a social, cultural and economic phenomenon related to the movement of people to places outside their usual place of residence, pleasure being the usual motivation. “ (UN and WTO, 2010:1). On the demand-side, tourism “refers to the activities of visitors and their role in the acquisition of goods and services.” From the supply side, tourism can be seen as “the set of productive activities that cater mainly to visitors.” (UNSTATS, 2010:1)

¹³ The Davos Declaration, titled “Climate Change and Tourism Responding to Global Challenges”, is the outcome of the Second International Conference on Climate Change and Tourism, that took place in October 2007 in Davos, Switzerland. The position paper includes recommendations for politicians, researchers, business leaders and consumers (Respect, 2009).

(ITB, 2010). The UNWTO even predicts growth rates that could amount to 1.6 billion international arrivals by 2020 (cited from Gössling et al., 2009).

The expected growth of tourism worldwide implicates simultaneously rising GHG emissions. Even if taking future energy efficiency gains into consideration, an emission escalation of about 130% to 250% by 2035 is estimated for business-as-usual scenarios in global tourism (UNWTO & UNEP, 2008; UNWTO, 2009). As Scott et al. (2010) conclude, tourism emissions would exceed the “budget for the entire global economy” by 2050 to 2060 (Scott et al., 2010:397). To slow down this trend, effective mitigation measures have soon to be adopted by all tourism stakeholders as a minimum if growth should continue. These trends highlight the urgent need of policies that “encourages truly sustainable tourism that reflects a “quadruple bottom line” of environmental, social, economic and climate responsiveness” (UNWTO, 2007a:2).

2.2.1 Tourism’s Contribution to Climate Change

Tourism is a very diverse industry and comprises many different elements such as transportation, accommodation and activities. Concerning the global contribution to GHG emissions, tourism can thus be integrated into several economic sectors whose shares are illustrated in figure 3. Above all, tourism is linked to the transport, building and waste segments which together make up 24% of the global greenhouse gas emissions (UNFCCC, 2009).

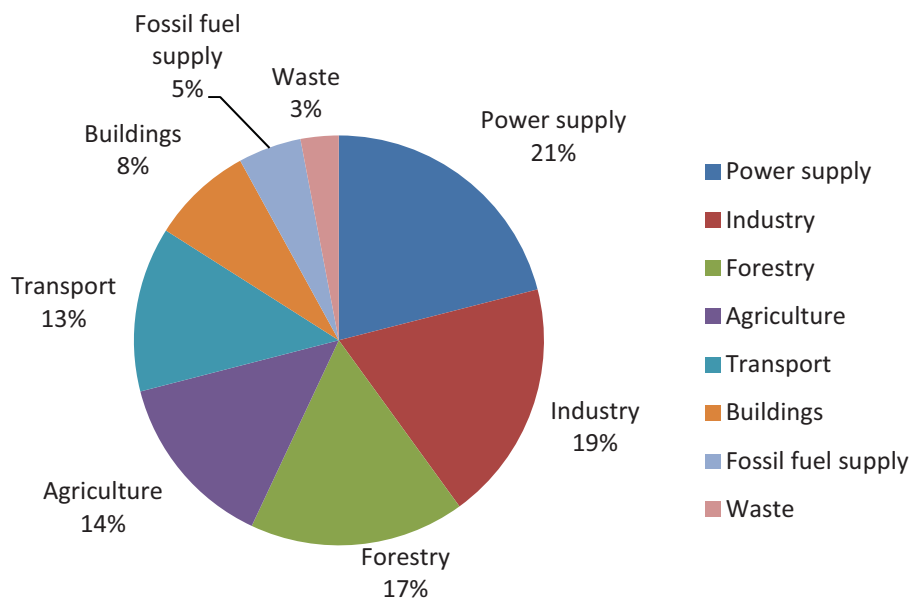


Figure 3 - The share of global greenhouse gas emissions by major sector.
(Source: UNFCCC, 2009)

The transport and the building sector are regarded to have large potentials in reducing GHG emissions (Schott et al., 2010). Despite the fact that in the last years these sectors have been reducing their share of global emissions, the emissions from the tourism industry are still rapidly

rising (e.g. Eijgelaar, 2009). However, researchers point out that there is a lack of exact figures, quality data and accessibility of data concerning tourism's GHG emissions (Zotz, 2010; Scott & Becken, 2010).

Of the estimated 5% of global GHG emissions that originate from the tourism industry (UNWTO & UNEP, 2008; UNEP, 2011), transportation accounts for 75% and is therefore the major contributor to emissions related to tourism (e.g. respect, 2009), followed by the accommodation sector with 21% (see figure 4).

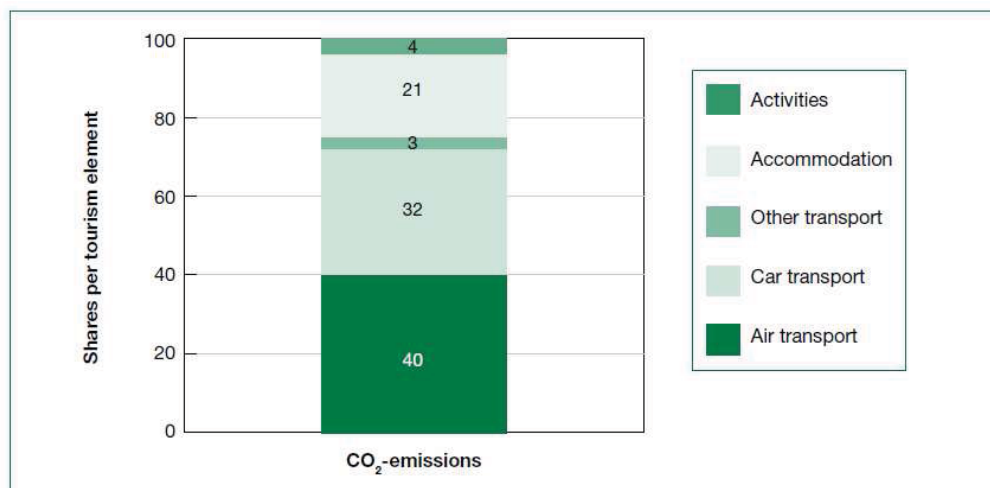


Figure 4 - Distribution of CO₂ emissions in pro cent from various tourism sub-sectors.
Source: UNWTO & UNEP 2008:34

When comparing ground and air transport, there is overwhelming agreement that aviation presents the more problematic contributor to climate change (e.g. Gössling et al., 2009; Strasdas, 2007). An example from Europe shows that with only 11% of all tourists traveling by airplane in Europe, the contribution of air travel to tourism transportation's emission is still 46% (UNWTO, 2008). This is explained by the effects of radiative forcing¹⁴ that apply to emissions being released in high altitudes and lead to significant GHG effects, in addition to the impacts of CO₂ emissions (Strasdas, 2007; Bows et al., 2009). It should be added that the tourism industry depends heavily on aviation and the share of international trips using air transportation is likely to rise from 45% in 2005 to estimated 55% in 2035 (UNWTO & UNEP, 2008). Within the EU, air traffic is the fastest growing source of GHG emissions (Bows et al., 2009) and it has become apparent that technological efficiency improvements in aviation are not sufficient to balance the forecasted growth in air traffic (Strasdas, 2007; Eijgelaar, 2009; Gössling et al., 2010).

¹⁴ Radiative forcing is defined as "the change in the net vertical irradiance (expressed in watts per metre square) at the tropopause due to an internal change or a change in the external forcing of the climate system, such as a change in the concentration of carbon dioxide or the output of the sun. Usually, radiative forcing is computed after allowing for stratospheric temperatures to readjust to radiative equilibrium, but with all tropospheric properties held fixed at their unperturbed values." Source: <http://www.ipcc.ch/pub/syrgloss.pdf>.

2.2.2 Climate Change's Impacts on Tourism

As already outlined, tourism is highly sensitive to changes in climate since climate is a resource for the industry and a crucial element of tourism products (Becken & Hay, 2008). Obviously, the impacts of climate change on tourism cannot be generalized for all regions and segments of tourism as they differ largely. But it became apparent that all key elements of the tourism products can be affected by climate change: Amenities, Attraction and Access (Conrady & Bakan, 2008). Many studies have identified that climate change influences the competitiveness of tourism destinations and produces “winners and losers” (UNWTO, 2009; Scott, 2011). While some tourism attractions and destinations are already facing negative effects and losing their attractiveness, other destinations might even benefit from the changing climate. In cooler destinations for instance, the moderate warming might impact the tourism sector in a positive way, while winter sport regions (less snow), small islands (sea level rise) or some summer destinations (too hot) are threatened to lose attractiveness (Conrady & Bakan, 2008; Schott et al., 2010). As climate is assessed as a central determinant of tourist decision making (UNWTO, 2009), it can therefore be expected that the tourist flows are shifting north in the northern hemisphere respectively south in the southern hemisphere as summers in those regions might become warmer and sunnier (e.g. respect, 2009; McKercher et al., 2010; Schott et al., 2010). At the same time, popular summer destinations might become less attractive for tourists due to frequent extreme heat waves, algae blooms, jellyfish invasions or coral bleaching (Becken & Hay, 2007; Ehmer & Heymann, 2008; Gössling et al., 2009). In general, evidences from all parts of the world show that “many natural systems are being affected by regional climate changes, particularly temperature increases” (IPCC, 2007:31) with “negative consequences for biodiversity and ecosystem goods and services, e.g. water and food supply” (IPCC, 2007:48). These effects are more than likely to impact the tourism, as tourism relies on an intact nature (respect, 2009). More frequent extreme weather events and natural disasters such as hurricanes, floods or severe draughts are further direct impacts of climate change that already started to negatively effect attractions and tourism facilities (UNWTO & UNEP, 200).

Furthermore, societal indirect impacts on tourism concern fossil fuel prices that have skyrocketed in recent years (Strasdas, 2010) and prices may keep rising in the next decades (Ehmer & Heymann, 2008). Additional pressure for rising prices that is related to climate change may come from carbon taxes that are being introduced by individual countries or as an effect of emission trading mechanisms. These impacts of adapting to climate change in form of higher costs could make travelling more expensive and thus limit access to tourism (Conrady & Bakan, 2008). In the long run, in some nations climate change could threaten economic development, lead to mass migration and risk political stability (UNWTO, 2009; respect, 2009). These indirect impacts particularly affect countries with a small domestic tourism market that are dependent on long-haul source markets. A decrease in long-haul travel, caused by rising costs of flights or climate policies may

and partly already does significantly impact the progress of tourism in developing countries (Strasdas, 2007; Gössling et al., 2009). Fewer long-haul flights increase the threat on developing countries of experiencing severe negative impacts on the tourism sector, mainly if they rely to a great extent on foreign income through tourism and invest high hopes in tourism as a developing aid (UNWTO, 2009; Perch-Nielsen, 2010). As a result, climate change implies even further difficult burden on the countries' way to reduce poverty (Ehmer & Heymann, 2008; Schott et al., 2010).

Despite the fact that impacts of climate change vary geographically, all economic sectors, but also nations as a whole “will have to contend with the challenges of climate change through mitigation and adaptation” (Scott et al., 2010:394).

2.3 Climate Adaptation Measures in Tourism

Climate adaptation is a very broad field and will play an increasing role for tourism in the future depending on the local situation. Regardless of the necessity of developing and adopting measures for many tourism destinations and actors to cope with a changing climate, it is beyond the scope of this thesis to discuss adaptation in detail and the concept will only be briefly introduced.

The term adaptation describes “initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects” (Baede, 2007:76). As complete avoidance of climate impacts on tourism is has been recognized as being impossible (UN, 2011), practices and policies to prepare for the climate change effects need to be put in place (UNWTO, 2009; Scott et al., 2010). The importance of adaptation strategies is enforced by the complex relationship between tourism and climate change that causes the change and is effected of it at the same time (Conrady & Bakan, 2008). Researchers stress that all tourism destinations and businesses “will need to adapt to climate change in order to minimize associated risks or capitalize upon new opportunities, in an economically, socially and environmentally sustainable manner” (Gössling et al., 2009:110). A survey conducted in Australia showed that tourism stakeholders are not yet prepared to invest in adaptation as a consequence of the apparent uncertainties in the scale of environmental impacts caused by climate change (Turton et al., 2010). The majority of measures that had been recognized by the stakeholders as adaptation could actually be classified as adaptation to climate policies, such as marketing the destination as “climate friendly” or reducing GHG emissions (Turton et al., 2010). In this context, Baede (2007) points out that there are various types of adaptation such as reactive, anticipatory, public and private and autonomous.

Even though research on climate change adaptation in tourism is still less developed compared to other industries, Scott & Becken (2010) put forward that the tourism sector has a fairly high

adaptive capacity to cope with climate change, concluding from the reaction and recovering of the tourism sector to past shocks like terrorism attacks, floods, earthquakes, tsunamis etc. However, the greatest capacity to react in regard of climate change is seen to lie with the travellers themselves, as they can mostly choose travel destinations that are not affected by climate change (Conrady & Bakan, 2008; Gössling et al., 2009).

2.4 Climate Mitigation Measures in Tourism

In the United Nation Framework Convention on Climate Change mitigation is defined as “a human intervention to reduce the sources or enhance the sinks of greenhouse gases” (UN, 2011:1). “Sinks” are hereby forests, soils or vegetation that are able to reabsorb carbon dioxide (UNFCCC, 2009). The climate impacts on tourism and its nature resources cannot be denied anymore by the tourism industry. As a result, the need of mitigation measures is now in general acknowledged among tourism stakeholders (UNWTO & UNEP, 2008; Eijgelaar, 2009). Lund-Durlacher (2007) stresses the importance of these climate protection measures to be on the one hand effective in the short-term and on the other sustainable in the long-term to stabilize the concentration of carbon dioxide in the atmosphere. Conrady & Bakan (2008) remark in addition that the long life-span of CO₂ in the atmosphere means that a cutback in emissions would not be evident in the short term. This fact complicates the “mission” of convincing the three major stakeholders in tourism, the industry, the governmental and global policy bodies as well as the tourists, to actively participate in reducing tourism’s GHG emissions (McKercher et al., 2010). Further reasons for implementing mitigation measures focus on economic factors and concern the rising prices of energy: tourism businesses can save money by adopting energy reduction measures, which automatically would lead to lower GHG emissions. Despite the investment costs, using renewable energy such as from solar panels, can pay off in the long-term and is therefore also economically interesting for e.g. accommodation businesses. Moreover, as will be discussed later on in this chapter (in 2.6.), ever more tourists expect that companies get involved in climate protection and their willingness to pay a financial contribution is slowly increasing (Gössling et al., 2010).

The most essential mitigation method is the reduction of energy use (Zotz, 2010), which can be obtained through a range of mechanism comprising technological, economic, behavioural and managerial instruments (UNWTO, 2007a). In literature¹⁵, commonly a combination of different strategies is suggested to reduce GHG emissions:

- Technological solutions
- Improved efficiency of aerial traffic management

¹⁵ Cf. e.g. Becken & Hay, 2007; Gössling et al., 2007; Strasdas, 2007; UNWTO, 2007a; Dubois & Ceron, 2008; Scott et al., 2010; Zotz, 2010

- Switch to more energy-efficient means of transportation
- Change of travel patterns
- Use of regulatory instruments for aviation
- Voluntary compensation of emissions

(Strasdas, 2007:5)

The technological solutions encompass on the one hand improving energy efficiency achieved through technical innovations. On the other hand they comprise the development of renewable energies and substitution of fossil energy with renewable energy sources. Scientists point out that in the aviation sector, the potential of technical emission reduction is limited (IPPC, 2007; Scott et al., 2010) and it becomes more and more difficult to reach further fuel efficiency improvements (Bows et al., 2009). Scott & Becken (2010) argue that insufficient research is currently available in the context of tourism. Apart from solely technical solutions, energy usage can also be reduced by enhancing logistics and traffic management in aviation, including the avoidance of waiting loops, change of flight altitudes, planes of higher capacity and optimization of flight routes, (e.g. Gössling et al., 2007; Strasdas, 2007). Nevertheless, as air transportation emits by far more GHG than other means of transportation, switching to more fuel-efficient options needs to be taken into consideration wherever possible. In addition advancing technology, reduction in GHG emissions could be achieved by implementing regulatory instruments such as emission fees and taxes on aviation and a change in management and behaviours. Modal shifts in travel pattern are often suggested for tourists to reduce their travel emissions, including travelling less often but with longer stays in the destination, fewer long-haul trips and switching from air to terrestrial transportation (e.g. McKercher et al., 2010; Strasdas, 2010). Schott et al. (2010), however, point out that positive impacts of behaviour changes are still trivial in regard to emissions development in the long-term (Scott & Becken, 2010). As a total abandonment of (touristic) flights is not realistic and feasible and would implicate severe economic consequences for many destinations (Lund-Durlacher et al., 2007), Buckley (2010) declares that only the increase of air travel costs by means of e.g. carbon taxes would actually be an efficient option to reduce aviation related GHG emissions.

Studies have shown that neither technological solutions nor changed travel pattern alone would have the potential to accomplish absolute emission reductions against the baseline of 2005 (UNWTO & UNEP, 2008). Figure 5 illustrates three different scenarios of global tourism's CO₂ mitigation potential, compared to the expected emissions in a business-as-usual scenario.

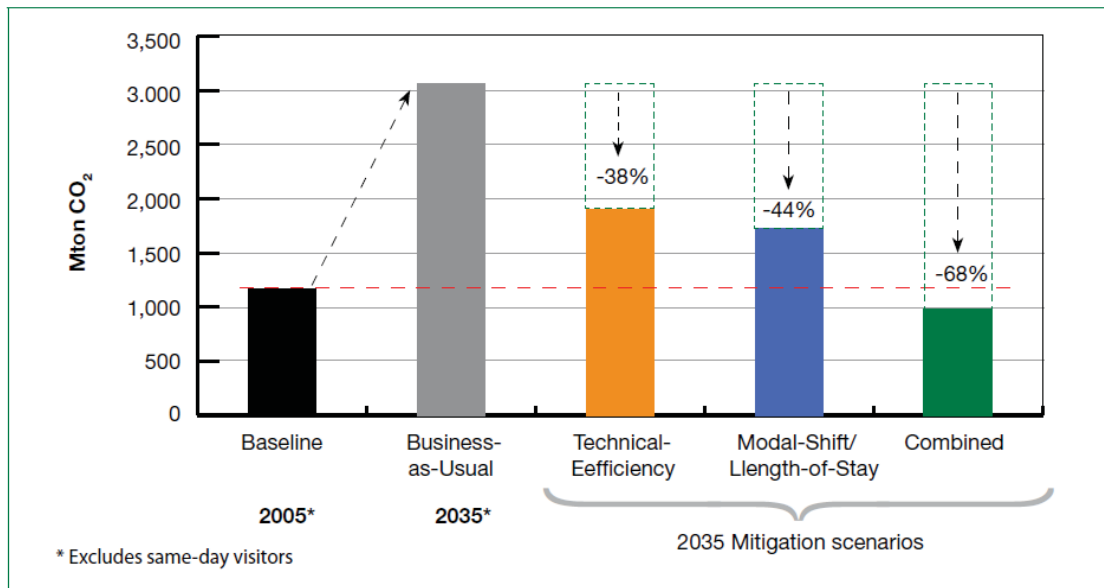


Figure 5 - Scenarios of carbon dioxide mitigation potential in relation to global tourism in 2035
(Source: UNWTO & UNEP, 2008:172)

By analysing figure 5 it becomes obvious that only a combination of both mitigation measures could potentially reduce tourism's emissions by 16% in 2035 in relation to 2005. This demonstrates also the importance of considering modified travel patterns in future planning of all tourism stakeholders aiming to mitigate emissions or adapt to climate change (Buckley, 2010).

McKercher et al. (2010) highlights that international policy bodies and tourism industry have started to get involved in climate protection, although this has often solely been a due to compulsory compliance strategies or reaction to economic obligation of more energy-efficient aircrafts. Eijgelaar (2007), however, argues that even if the effective implementation of e.g. fuel taxes and emission trading schemes that include the aviation sector, may lead to specific GHG reduction, more people would start flying in the meantime and compensating this reduction. According to Schott et al. (2010) and Scott & Becken (2010) here is still a lack of research about the most effective ways of mitigation in tourism, emphasising the question what type of voluntary measures or governmental regulations would possibly lead to the tourism industry's best contribution to reducing GHG emissions.

2.4.1 Voluntary Carbon Offsetting in Tourism

In the last years, voluntary carbon offsetting has become increasingly popular within the tourism sector. Progressively more tourism stakeholders are using offsetting as a mean to mitigate impacts of traveling and engage in climate protection (e.g. Boon et al., 2008; Dubois & Ceron, 2008;

Gössling 2009; Kollmuss et al., 2008; Zotz, 2010; Mair, 2011). Carbon offsetting, or synonymously carbon compensation, belongs to the tools of “carbon management” that can be described as “a management system that aims to reduce a company’s or organisation’s GHG emissions as much as possible, ideally to zero” (Strasdas, 2010:60). Carbon offsetting can basically be described as the purchase of carbon credits (“offsets”) by emitters, seeking to “compensate” their already emitted GHG to neutralize the greenhouse effect. Companies or organizations thereby invest in projects that reduce or absorb GHG emissions and generate an equivalent of carbon credits to the amount (in tons) of emissions they reduced (e.g. Gössling et al., 2011). The method of carbon offsetting is possible, due to the even distribution of GHG in the atmosphere; therefore the location of GHG reduction is not important for global climate protection (e.g. Kollmuss et al., 2008). In comparison with the compliance market, Voluntary or Verified Carbon Reduction credits (VER) are sold to organizations or individuals that do not have to comply with the regulatory carbon market. The quality of VER should be equal to Certified Emission Reductions (CER) from the regulatory system with VERs complementing and not duplicating CERs (Sisman, 2010). In the travel industry, carbon offsetting is mostly used to voluntarily “neutralize” flight emissions, both from individual travellers and from tour companies that advertise “carbon neutral” products. The system of carbon offsetting has the advantage over other types of mitigation measures that it is widely available to every person willing to compensate their GHG emissions (Eijgelaar, 2007). Until now, neither individuals nor companies are required by law to reduce their emissions, Kollmuss et al. (2008) conclude that the “availability of offsets in the voluntary market may therefore lead to additional emissions reduction that would not have happened without the availability of offsets” (Kollmuss et al., 2008:3). Nevertheless, Gössling et al., (2007) and Strasdas (2007) argue that voluntary carbon offsetting should preferably be used only for flights that cannot be avoided and can only be regarded as a short-term option to mitigate the impacts on climate change.

Despite its positive aspects, the concept of voluntary carbon offsetting is also criticized in literature and its utility to climate protection brought into question. Mair (2011) for example argues that this type of mitigation sets the responsibility for carbon compensation on the consumer instead of the polluter. Although the promotion of carbon offsetting within the tourism sector may raise public awareness (e.g. Dubois & Ceron, 2008), it is often regarded as a means to lighten up guilt because of air travel emissions to relieve one’s conscience (Conrady & Balkan, 2008). The lack of transparency and uncertainties in terms of measurements of GHG emission reductions and their permanence is also critically scrutinized (Strasdas et al., 2010; Mair, 2011). Standards that aim to tackle this problem within the voluntary market will be pointed out in the next section of this chapter. Many further points of criticism that are valid for the regulatory market can also be brought forward for the voluntary market, for example that offsetting often distracts from the necessity of avoiding GHG emissions in the first place, before they are being emitted (cf. e.g.

Bullocks et al., 2009). Comparing the total travel emissions with the sales of voluntary carbon credits, scientists estimate the factual mitigation potential of carbon offsetting as low (Dubois & Ceron, 2008; Eijgelaar, 2009). To actually compensate 10% of all GHG emissions from aviation, Gössling et al. calculated in 2007 that the voluntary carbon market would need to increase by 400%.

2.4.2 Voluntary Carbon Markets, Standards and Certifications

Due to its voluntary nature, the voluntary carbon market has still only a small volume in relation to the compliance market, although it has expanded rapidly in the last years (e.g. Kollmuss et al., 2008; Gössling, 2011). Most of the offsetting organisations that offer voluntary carbon compensation schemes are located in Europe, North America and Australia, the regions where voluntary offsetting is mostly applied. While many of these offsetting organisations are operating as charities, numerous companies offer carbon-offsets on a commercial basis (Strasdas, 2007; Scott & Becken, 2010). In recent years, several studies revealed significant differences between the offsetting organisations regarding their emission calculation, type of compensation projects, price levels of offsets and verification processes (e.g. Gössling et al., 2007; Boon et al., 2008; Strasdas et al., 2010). Sisman (2010) from the Tourism Industry Carbon Offset Service (TICOS) confirms these observations and points out that “no single regulatory framework for voluntary schemes” exists. As an example he adds that “some of these schemes vary by as much as three hundred percent in calculating the carbon cost of a flight”¹⁶. These variations are firstly a result of the different RFI factors with a range of 1 (no factor) to 3, applied by the offsetting organisations to take any secondary, non-CO₂ warming into account. Further differences of emission calculations arise as some organisations make use of standardized carbon figures for specific airplanes, while others use complex calculation models (e.g. Boon et al., 2008; Strasdas et al., 2010; Zotz, 2010). The disparities in price per ton of CO₂ can be attributed among others to the different types of offsetting projects and the fact that an exact calculation of carbon emissions being saved by a project is often not possible (Bullock et al., 2009).

Regarding the many different choices of compensation offers on the voluntary carbon market, it is often criticized that detailed and comprehensible information are not displayed by the offset providers. This lack of transparency makes it even more difficult for travelers and companies that are interested in compensating their emissions, to assess the effectiveness, sustainability and trustworthiness of their offsets (e.g. Gössling et al., 2007; Strasdas et al., 2010). Numerous media reports focused in recent years on the low quality of many offsetting projects and further upset potential customers. To address these weaknesses, tackle both problems and improve the quality of the carbon reduction projects, several standards have been developed (Kollmuss et al., 2008).

¹⁶ Cited from: <http://www.ticos.co.uk/generic/about.htm> (last accessed: 10.09.2011)

These standards can be seen as guidelines that voluntary compensation projects should preferably fulfill.

An important role within the standards plays the principle of “additionality” that has to apply to projects generating carbon credits. The principle of additionality describes that the carbon reductions effect should not have happened anyway without the carbon offset project taking place (e.g. Zotz, 2010). Compared to the CDM standards, projects certified by the more demanding Verified Emission Reduction Standard Plus (VER+) or the even stricter Gold Standard (GS) guarantee additionality, the GS standard also guarantees sustainable development benefits for local communities. Further central principles comprise the permanence of GHG reductions and verification to assess the reliability of the standards (Gössling et al., 2007; Eijelaar, 2009). Compensation agencies that are committed to VER or GS can therefore be considered as more credible than others (Zotz, 2010). The CDM mechanism is part of the regulatory carbon market but can additionally be used for voluntary compensation projects that are meeting the requirements. Table 2 displays the CDM in comparison with the GS and VER+ standards that are commonly acknowledged as high quality standards, the GS is now also widely recognized as a benchmark standard.

Table 2 - Summary table of selected standards (Extract from Kollmuss et al., 2008:X)

Main Supporters	Market Share	Additionality Tests (relative to CDM)	Third-party Verification Required	Separation of Verification and Approval Process	Registry	Project Types	Excludes Project Types with high chance of adverse impacts	Co-Benefits (relative to CDM)
Clean Development Mechanism								
UNFCCC Parties	large	=	yes	yes	yes	All minus REDD, new HFC, nuclear	no	=
Comments:	The CDM is part of the Kyoto protocol and aims to create economic efficiency while also delivering development co-benefits for poorer nations. It has been successful in generating large numbers of offsets. Whether it also has delivered the promised development co-benefits is questionable.							
Gold Standard								
Environmental NGOs	small but growing	=/+	yes	yes	Planned	EE, RE only	yes	+
Comments:	The GS aims to enhance the quality of carbon offsets and increase their co-benefits by improving and expanding on the CDM processes. For large scale projects the GS requirements are the same as for CDM. Yet unlike CDM, the GS also requires the CDM additionality tool also for small-scale projects.							
VER+								
Carbon Market Actors	small but growing	=	yes	no	yes	CDM minus large hydro	yes	-

Comments:	VER+ offers a similar approach to CDM for project developers already familiar with CDM procedures for projects types that fall outside of the scope of CDM.
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Even though there are currently no requirements for standards for offsetting organizations, Boon et al. (2008) describe their general impression that “most organisations take their responsibility very seriously and try to adhere to standards that do exist” (Boon et al., 2008:81). Still, standards cannot ensure that the carbon credits purchased by travellers or companies result in durable, real carbon reduction and the investment in economically, socially and environmental meaningful renewable energies¹⁷.

The Gold Standard is a non-profit certification organization and was launched in 2003 at an initiative of the World Wide Fund for Nature (WWF). Beforehand, stakeholders from 40 countries, including governments, NGOs and private sector specialists have been consulted and involved in developing the standard (GS, 2011). The Gold Standard is now endorsed by over 60 development and environmental NGOs and commonly described as a high quality and the most sustainable carbon offsetting standard. The GS implements the CDM standards, but its objective is to assure the projects fulfil the principles of additionality, permanence and of clear sustainable development benefits over and above the GHG reductions and CDM requirements. The focus lies on energy efficiency and renewable energy projects, whereas carbon sequestration projects are excluded. GS projects are independently verified and now the standard can apply to both, CDM approved projects (CER) and VERs voluntary projects (GS, 2011).

GS projects include:

- use of plant oil for cooking stoves,
- domestic coal fire efficiency improvement,
- small scale biodigesters,
- improved cooking-stoves,
- ecologically sound fuel switch to biomass,
- supply and distribution of energy efficient light bulbs and water saving products in households,
- biodiesel from waste oil/fat from biogenic origin.

(GS, 2011)

Tourism focused compensation agencies that only offer carbon credits from Gold Standard certified projects are e.g. atmosfair in Germany, GreenSeat from the Netherlands, MyClimate in Switzerland and the Australian organisation Climate Friendly.

¹⁷ Cf. <http://www.muchbetteradventures.com/view/32/problems-with-carbon-offsets> (accessed: 20.07.2011)

2.4.3 Offsetting Projects

Emission reductions can be achieved through various types of offsetting projects. There are generally three different types of offsetting projects identified:

Table 3 - Types of Voluntary Carbon Offset Projects

Project type	Description
Carbon Sequestration	Vegetation absorbs CO ₂ from the atmosphere through photosynthesis into biomass, forest products and soil. Well managed forests are net carbon sinks and can store GHG, although the permanence is often not secured. Carbon sequestration through reforestation, afforestation or forest conservation is considered to be the oldest type of carbon offsetting.
Energy Efficiency	Emissions are saved by switching to products or systems that use less energy compared to conventional technology to carry out the same tasks. Enhanced energy efficiency can be achieved for example by insulating buildings, upgrading power plants, replacing old with new electrical devices or moving from open fire to fuel-efficient cooking stoves.
Renewable Energies	Renewable energy projects directly reduce carbon emissions by replacing fossil fuels with energy from renewable sources. These projects include wind, biomass, hydro and solar energy.

Sources used: Becken, 2004; Gössling et al., 2007; Brouwer et al., 2008; Kollmuss et al., 2008; Bullock et al., 2009; Eijgelaar, 2009;

Numerous studies discuss compensation and especially carbon sequestration projects quite controversially and raise concerns about the credibility of (voluntary) offsets. Forestry projects are reviewed critically mainly because of the remaining risks, of draughts, fires, forest clearings and even the natural decomposing of dead trees releases the stored CO₂ again. Hence, a permanent reduction of GHG emissions cannot be secured (e.g. Strasdas, 2007; Brouwer et al., 2008; Dubois & Ceron, 2008; Zotz, 2010). The effectiveness of forests as carbon sinks is further questioned, as various factors influence the storage capability of trees and reliable calculations of carbon uptake

have proven to be rather difficult (Becken, 2004). That results in a large number of different rates of annual sequestration for new forests, ranging in literature from 1.2 to 35 tons of carbon dioxide per hectare (Boon et al., 2008)

Nevertheless, forestry projects have potential advantages:

- Protecting forest from deforestation or reforestation can entail socio-economic benefits; potentially help to advance local development, besides the environmental and biodiversity gains (e.g. Gössling, 2007).
- Forestry projects are generally less expensive to realize than projects involving technology (e.g. Strasdas, 2007).
- Projects might be easier to market and sell to e.g. travelers as trees are a symbol of the environment and investing in forests is tangible (Becken, 2004).

It is argued in literature, however, that energy efficiency and renewable energy projects should be given preference as they reduce GHG emissions before they are going to be released. Such projects address two significant current problems: first, that too much energy is utilized for a given product and second, that fossil energy sources are used that ultimately are in finite supply. Additionally, energy-related projects may entail effects of providing social and environmental co-benefits to local communities and facilitate technology transfer to developing countries (e.g. Strasdas, 2007; Kollmuss et al., 2008). “Gold Standard” offsetting projects are always operated in developing countries; also the majority of non-certified projects are located in non-annex-I countries. As developing countries can benefit from sustainable offsetting projects, Becken (2008) remarks that the increasing interest of tourists to pursue carbon compensation could become a great chance for these nations.

Research conducted by Gössling et al. (2007) revealed that the majority of voluntary compensation agencies focused on forestry projects and less than a fourth of the organisations identified in this study compensated only through energy efficiency and renewable energy projects. Updated research is needed to find, if this outcome is still valid five years on. Regardless of the type, compensation projects have to be carefully developed, managed and regularly monitored, in order to entirely offset the calculated emissions and neutralize the greenhouse effect (Gössling et al., 2007; Strasdas, 2007). How much voluntary offset schemes actually contribute to emission reductions is highly dependent on the quality and success of the projects. However, Kollmuss et al. (2008) points out that the quality of carbon compensation projects has often been criticized as being too low, especially in regard to reforestation projects.

The potential “consumers” of carbon offsets seem to favour various compensation projects differently. Studies revealed that profits from carbon tax used for environmental, nature conservation projects received the highest support by tourists compared to energy projects (Lütters & Strasdas, 2010; Gössling, 2011).

2.5 Examples of Climate Initiatives in Tourism

In recent years, a number of tourism associations, organisations or destinations, predominantly in industrialized countries, started their own climate initiatives, set up mitigation strategies and developed carbon management guidelines for its member companies or the region. Some destinations state the ambitious goal to achieve “carbon neutrality” in tourism (Scott & Becken, 2010) and even a handful of entire countries like Norway or New Zealand announced to strive for it. But the concept of “carbon neutrality” is not without critics and often declared as “green washing”, because not all GHG are avoided as the name might suggest. Instead, the remaining emissions are simply being offset (cf. Rumpelt, 2010; Scott, 2011). A case study by Smith and Rodger (2009) on New Zealand’s offsetting potential to compensate all tourism related emissions, showed that even though the country is “theoretically, physically able to implement such offsetting schemes as reforestation [...] but no single offsetting scheme targeted inside the country appears physically and/or politically realistic” (Smith & Rodger, 2009:23). Another example for climate protection activities in tourism on a national level comes from Australia: the Climate Action Certificate Program (CACP). The company “Sustainable Tourism Australia” (STA), which belongs to the non-profit Public Company “Ecotourism Australia”, initiated and manages this program (STA, 2011). The CACP is developed for all tourism sectors including accommodations, attractions, transportation, tours and travel agents. Its goal is to reduce carbon emission and also assure tourists that “certified products are backed by a commitment to sustainable practices related to addressing climate change”¹⁸. Taking the fact into consideration that the tourism companies are at different points in regard to their climate protection activities, STA provides a ranking with three different certification levels: Climate Action Business, Climate Action Innovator and Climate Action Leader as displayed in figure 6 (STA, 2011).

¹⁸ Source: www.sustainabletourismaustralia.com (accessed: 20.07.2011)

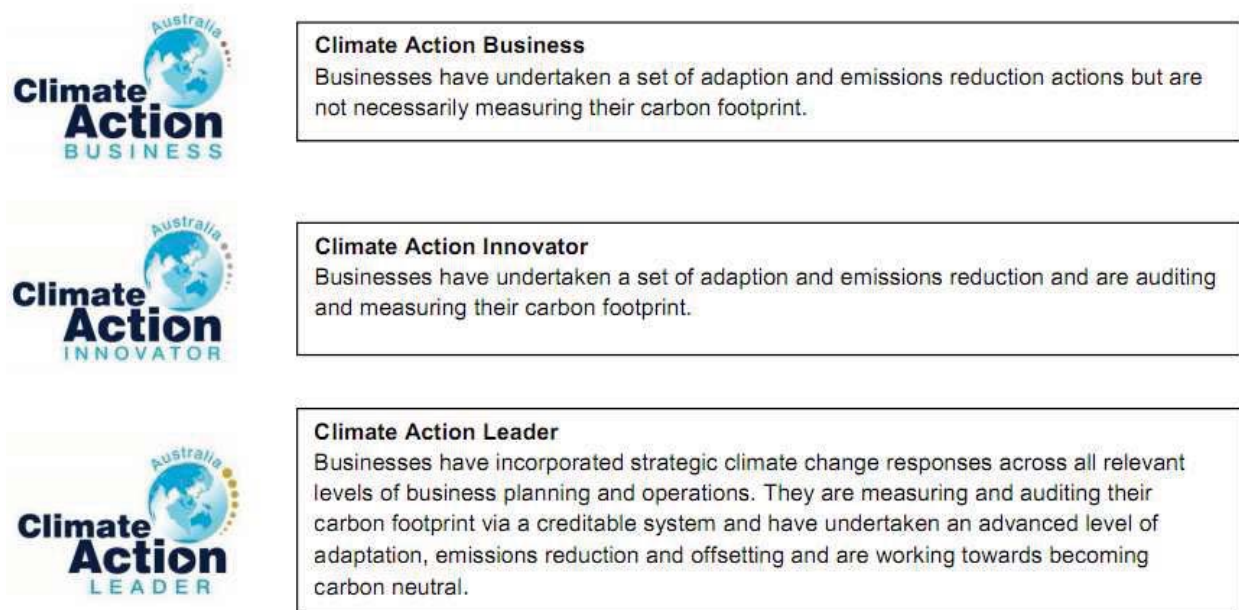


Figure 6 - The three different levels of the CACP (Source: STA, 2011)

According to STA, it is aimed to upgrade the program regularly in the future to adapt to new technologies and tools that become available. Furthermore, the establishment of an auditing process by a third party is planned to warrant the credibility of CACP.

Despite many positive aspects of this initiative, it can be controversially discussed if 4WD tours or motor cruises should be certificated as sustainable and “climate friendly tourism”. It can also be critically viewed that not the actual reduction of carbon emission is certified rather than the adaption itself that businesses have undertaken or plan in their climate strategy. The list of all currently certified companies is displayed on the CACP website¹⁹ and so far, mostly accommodation providers have been certified. A weak point regarding certification systems that focus on accommodation businesses, and also applicable for the CACP, is the often neglected transport to and from the destination (c.f. Zotz, 2010). “Forum anders reisen”, a German association of sustainable (outbound) tour operators places “climate friendlier” transport explicit into focus. Where ever possible, tour operators are called to replace flights with train transport in their itineraries and offer clients the possibility to offset their travel emissions. Beyond that, members of *forum anders reisen* are prohibited from offering air transport for journeys under 700 km²⁰. In comparison to the Australian certification program, *forum anders reisen* also excludes high energy-intensive activities, as e.g. helicopter flights.

¹⁹ www.sustainabletourismaustralia.com

²⁰ Source: <http://forumandersreisen.de> (accessed: 20.07.2011)

2.6 Travellers' Awareness and Attitudes Regarding Climate Change

When looking at the voluntary carbon market, analysing its pros and cons and developing new strategies for the tourism industry, it is of utmost importance to understand the potential customers and get to know their attitudes towards climate change. In this chapter, literature on travellers' awareness of climate change and their acceptance of carbon offsetting is reviewed.

Among all tourism stakeholders, the customers are the ones who can adapt most easily to climate change by altering their destination choice and or travel pattern (Conrady & Bakan, 2008; Gössling et al., 2009). According to a number of studies, the majority of travellers have become somewhat aware about the fact that tourism is contributing to climate change (e.g. Becken, 2004; WWF, 2009; Zotz, 2010; Gössling, 2011). However, studies also revealed that rising climate awareness among tourists does not always increase in their willingness to pay to offset the emissions (e.g. Kollmuss et al., 2008; Eijgelaar, 2009; McKercher et al., 2010). In tourism surveys, responders repeatedly state their willingness to behave "climate friendlier" on the one hand, while, on the other hand, their spending pattern does not correspond to their stated attitudes (cf. e.g. ABTA, 2011; Schott et al. 2010, Mair, 2011). One reason for this attitude-behaviour gap could be found in the variety of factors that play a role in making a holiday decision. The high awareness of climate change but low willingness to pay for offsetting is also believed to be due to a lack of understanding of the offsetting mechanism and missing transparency of the voluntary offsetting schemes (e.g. Lütters & Strasdas, 2010). The complexity of climate change and carbon offsetting from the customers' perception is further complicated by the long lifespan of GHG in the atmosphere. Due to that, only long-term effects of climate protection measures might become visible while in the short term visible results are lacking. Customers are furthermore skeptical about the effective use of their donated money and want to be informed what their contribution is used for (Mair, 2011; Gössling, 2011). In psychology literature studying reasons for people do acting according to their awareness of climate change, it has been identified that apart from a lack of knowledge, different barriers and specific constraints prevent people from becoming more aware of climate change and acting in accordance to it. These barriers can be economic or physical environmental barriers, but also of psychological nature such as social comparison, habit, ignorance, mistrust or based on the believe that humans cannot influence climate change (Swim et al., 2009, cited from Schott et al., 2010). Another, often mentioned as the main reason for tourists not to pay for carbon compensation, can be found in the passengers' disbelief that the compensation program will really make an impact (Brouwer et al., 2008; Lütters & Strasdas, 2010). In short, if customers have any doubt that offsetting as an extra service delivers the promised benefits, their willingness to pay for something without personal gain can be expected to be low.

Nevertheless, the percentage of tourists that actually do offset their emission, although being still low, is growing and represents a vital market segment (e.g. Boon et al., 2008; Mair, 2011). A study from Germany shows that although two thirds of German air travellers indicated an interest in offsetting their GHG emissions, only one percent of all flights are currently compensated in Germany, according to the compensation agency atmosfair (2011). Similar figures have been observed in the United Kingdom, with 2-5% of all tourists actually offsetting their flights (Eijgelaar, 2009). In Australia, slightly higher figures can be expected, as 16% of respondents of a survey stated to already have purchased carbon offsets (Mair, 2011).

Asked for their reasons to voluntarily pay for carbon offsets, travellers name a range of different motivations. Brouwer et al. (2008) surveyed the willingness to pay for carbon taxes among tourists (see figure 7) and found out that the main motivations are “traveller responsibility”, “environmental concern” (each 24%) and “future generations” (22%) followed next by “avoid disaster” with only 12%.

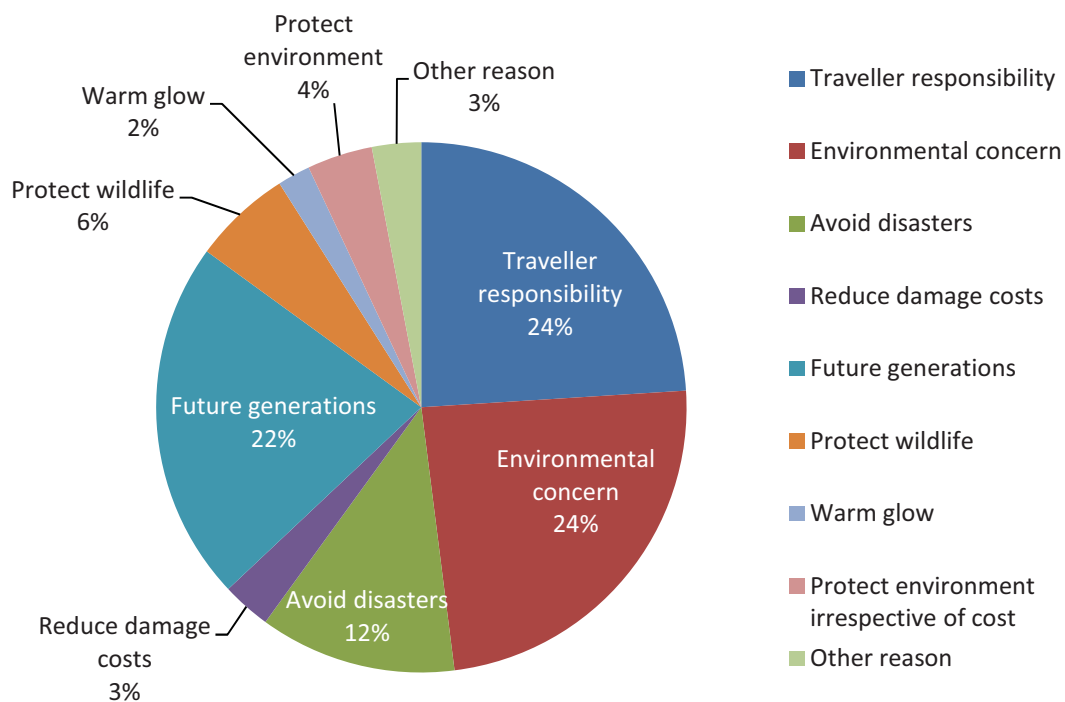


Figure 7 - Motivations for air travellers' willingness to pay for a carbon travel tax.
(Source: Brouwer et al., 2008:306)

From a marketing perspective to sell carbon offsets, it is crucial to know and understand the motivations behind the buyers. Brouwer et al. (2008) also observed that flight passengers seem to be more willing to participate in carbon offsetting, if other travellers participate too. This phenomenon could lead to a faster increase in countries where an increased number of air travellers already purchases offsets. So far, tourists mostly seem to consider climate protection efforts of tour operators as a positive add-on rather than their own responsibility (Gössling, 2011). The British

travel association ABTA has exposed in its *2011 Consumer Trends* survey that holiday makers “expect travel companies to take responsibility for “doing the right thing” terms of looking after the environments of places they love to visit and of the people who live there” (ABTA, 2011:1). Furthermore, the study found out that in total 19% of travellers would choose a more sustainable tourism business over another company. This percentage rose to 33% among the group of “cosmopolitans”, which concludes holiday makers who travel the most compared to other groups and adopt earlier trends than others. Indications are observed that sustainability and climate-friendliness considerations slowly, but increasingly influence tourists’ travel choices (UNEP, 2011). A recent survey conducted by the Forschungsgemeinschaft Urlaub und Reisen (“Research Association for Holiday and Travel”) FUR in cooperation with the WWF Germany revealed that 8% of German travellers currently take environmental standards into account when booking a holiday and 20% would like to do so for future travel decisions (Poser, 2011).

Extended education of the consumer and an increase of tourism websites informing about the possibility to directly compensate carbon may raise customers’ willingness to pay for carbon offsets according to Eijgelaar (2009). Despite the aspect that advertising for carbon offsetting may increase awareness of the impacts of traveling on climate change, tourists prefer to rather keep traveling as usual and purchase carbon offsets than to voluntarily alter their travel behaviour (Lütters & Strasdas, 2010; Scott, 2011). For instance McKercher et al. (2010) carried out a study in Hong Kong that showed how particularly those tourists travelling most frequently show very little interest in changing travel pattern in order to reduce their carbon footprint. Another survey conducted by Tourism Australia in 2008 confirmed this trend. Australia’s six core markets were studied: even though travellers expressed strong concern for environmental degradation and climate change issues, respondents were hardly prepared to change their travel behaviour, mode of transport or purchase carbon credits (McKercher et al., 2010). Especially travellers with higher income seem to be less willing to switch towards more environmental friendly travel options (WWF, 2009). Mair (2011) argues in this context that through promoting offsetting, there is a risk that tourists consider carbon offsets as a relative cheap and easy way to “feel less guilty” while flying and additionally contribute to climate protection. Because carbon offsetting as the only climate protection measures will not be sufficient to combat climate change as pointed out in chapter 2.4, the observed attitude of travellers could eventually hold back real mitigation effects. The extent of tourists’ reactions to climate change is highly difficult to predict, because a clear linearity cannot be assumed (Plume, 2009).

2.7 Research Questions

The literature review has highlighted the importance for tourism stakeholder to get involved in climate mitigation measures. Still a minority (but a rising number) of tour operators adopt different

types of mitigation measures. Apart from mere environmental reasons, there is also the rising expectation from customers, which could play a role in companies' motivation to address this topic. In literature, the pros and cons of different carbon offsetting projects have been discussed, but what type of project actually works best from the tour operators' point of view? A lack of studies has been identified, which focuses on the tour operators' perception of climate change, their motivations for mitigating emission, and the effects of their climate protection measures. Research on front-runners in climate activities is needed, as it can provide valuable information for further climate mitigation strategies in the tourism sector, such as for tour operators in developing countries as discussed in the case study. Aiming to fill this gap, the following set of research questions has been identified for the first part of this thesis:

- *What are the main motivations behind the tour operators' involvement in climate protection?*
- *How do tour operators compensate travel related carbon emissions? Do they cooperate with an offsetting agency or operate own projects? Why do they prefer either or?*
- *Is carbon compensation optional or compulsory for their clients and which way is more effective resp. which strategy leads to a higher willingness to pay?*
- *What kind of further technological or structural changes to mitigate climate change do tour operators take?*
- *How do tour operators communicate their climate activities and how is their customers' reaction and feedback?*
- *What challenges do tour operators face in regard to climate mitigation measures?*

To answer the research questions, tour operators that can be described as front-runners in terms of climate mitigation activities need to be identified and interviewed, the results analysed and compared.

3. Methodology

A suitable methodology that meets the purpose of the thesis was developed after carrying out the literature review, and defining the research questions. This chapter briefly introduces the qualitative research approach chosen and describes the working steps of this study.

3.1 Qualitative Research Approach

In contrast to quantitative research where frequency of occurrences of certain information is analyzed and statistical significance produced, the qualitative approach seeks to analyse and

interpret the content of the information (Zhang & Wildemuth, 2009; Gläser & Laudel, 2009). To answer the research questions, as it is aimed to extract meaning from information and gain insight into specific subjects, the qualitative research approach was judged most suitable.

In a qualitative research approach, the “inductive” or “theory construction” method is typically applied (Hesse-Biber & Leavy, 2011; Finn et al., 2000). When applying the inductive approach, as opposed to the deductive approach, data of a particular topic is accumulated first, to be subsequently analysed and a more general understanding employed (Zhang & Wildemuth, 2009; Hesse-Biber & Leavy, 2011). The motive for this model is that theories and explanations can only be of value if grounded by research observations (Finn et al., 2000). For the first main part of this research, dealing with tour operators’ climate change mitigation measures, the inductive approach was most applicable. The results of this chapter, however, were then used to construct hypotheses to be tested within the case study, hence researching the second part using a deductive approach.

3.1.1 Primary Data Collection – Guided Expert Interview

For the primary data collection of this research it was decided to conduct expert interviews with tour operators. This method promised to gain a deeper insight and better results that would help to answer the research questions rather than solely analysing secondary literature or websites. “Experts” are hereby defined as people that possess area-specific knowledge on the bases of longstanding experience (Mieg & Näf, 2005). Within the expert interviews, the tour operators or experts in this case, respond freely without provided answer possibilities. The practise of using open questions is favourable, because it permits the interviewees to reply in an unrestricted way, leading to more profound responses than it is the case by using closed questions (Bundeanu, 2007). The method of semi-structured interviews was chosen to collect data, as it was aimed to elicit views to specific questions rather than gain factual information. Therefore semi-structured interviews have several advantages over structured or completely open interviews. On one hand, the semi-structured or guided interview follows a prepared guideline with formulated questions and facilitates subject focussed conversations. On the other hand the interviewer has the flexibility to react to given answers, inquire after further details, and is not tied to the exact order of themes (cf. Mieg & Näf, 2005). The interviewer therefore has the chance to possibly receive more information than with a structured or standardized interview. The interview guidelines hereby support the interviewer to ensure that all topics and questions have been dealt with during the conversation (Gläser & Laudel, 2009). Whenever non-anonymous interviews are chosen like the conducted face-to-face interviews in this study, the effects of social desirability have to be born in mind. Social desirability can bias the respondents and generate a tendency of answering in a way that seems to be more socially acceptable in society (Bundeanu, 2007). Closed-ended questions are more

vulnerable to produce false results in this respect, hence presenting another reason to use open questions in this study (cf. McKercher et al., 2010). The purpose of the qualitative expert interviews was not to receive exact comparable data, but to obtain detailed information in the tour operators' field of expertise.

3.1.2 Construction of Interview Guidelines

The guideline that was developed comprised several subject areas with main and sub-questions. The questions were derived from the research questions and could be summarized as “what is already done and why” and “what are the effects of it”. A principal guideline with formulated questions was generated. However, the interview questions, for the example of tour operators, were customized for each tour operator after analysing their websites. In this way, the questions could be formulated more specifically to gain further information than already published on the website.

For the case study, the interview guideline was altered as the purpose was to study the awareness and perception of climate change and the tour operators' interest in mitigation measures, rather than to investigate the “why” and “how” tour operators are already active and the effects of their activities, as it was the case in the first study part. A further difference was that the same interview guideline was used for all tour operators in the case study. In this research scenario, emphasis was put on the accuracy of data and, with the help of using the same framework and wording, the aim was to reduce the risk that previous interviews influenced the subsequent conversation. The guideline interview questions can be found in the appendix.

3.1.3 Selection of interview partners

The first step in selecting potential interview partners was to identify the target groups that meet the purpose of the thesis. To narrow down the choice, the following list of criteria was developed for selecting the interview partner, shown in table 4:

Table 4 - Criteria of the Pre-Selection:

International Tour Operators Example	<ul style="list-style-type: none"> - The company is either an inbound or outbound tour operator - The tour operator has adopted measures to mitigate climate change including any type of carbon offsetting - Information about the climate protection measures can be found on the company's website - Information on the website are available either in English or German
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Case Study Namibia

- The company is based in Namibia, respectively has a branch or destination management office in Namibia
- The company is predominantly acting as a tour operator²¹

Tour Operators Example (Chapter 4):

Using the above stated pre-selective criteria, an extensive internet research was conducted on tour operators worldwide, with English and German being the languages used in search engines. As it concerns a non-representative selection, this restriction was not considered as a disadvantage, because of the broad availability of tour operators' websites in English, including countries with a different official language than English. The Adventure Travel Trade Association (ATTA) provided hints of tour operators that are especially active in terms of climate protection.²²

Case study (Chapter 5):

A purposeful and specific selection was made on basis of a Namibian tour operator directory. Emphasis was thereby put on a moderately representative selection of Namibia's tour operators. Hence the selection includes small, medium and large companies offering a range of tourism products in different price categories. In the process of selecting and contacting potential interview partners, assistance was provided by several people from the Namibian tourism, respectively conservation sector belonging to the following institutions and organisations: Eco Awards Namibia, Namibia Nature Foundation (NNF), Tour and Safari Association (TASA) and Hospitality Association Namibia (HAN)²³.

3.1.4 Transcription and Analysis

All interviews with the tour operators were audio taped and subsequently transcribed. For the transcription, the summary method was used (cf. Hesse-Biber & Leavy, 2011; Zhang & Wildemuth, 2009), as the research questions do not imply a direct, literal transcription or observations. In the summary transcription, phrases were smoothed for reasons of clarity and comprehensibility. Furthermore, sentences that were not in direct relation to the actual questions, such as preliminary remarks, were not included. Statements that are quoted in the discussion part were transcribed literally.

²¹ Many tour operators in Namibia also entail additional touristic services within the same company, such as lodges, guesthouses or own car rental or air charter company. As an exception, one accommodation provider has been selected that is only limited involved in tours. It was recommended by several tourism stakeholders in Namibia to include this company because of its high involvement in conservation activities.

²² ATTA is a "global membership organization and home to [...] more than 700 responsible, profitable businesses, destinations and media who transform customers and businesses alike into advocates for sustainability" (Source: <http://www.adventuretravel.biz>)

²³ A brief introduction of Namibia's tourism stakeholders will be given in chapter 5.2.6

The transcripts supplied the primary source data for the evaluation and discussion. In light of the open structure and the explorative character of the expert interviews, no specific data coding theme was used, as that could have restricted the course of analyzing (cf. Mayring, 2000). However, to facilitate the analysis and comparison of the outcome, themes were extracted from the interview guideline for both, the international examples as well as for the case study results. The interpretation of the data was conducted using a qualitative descriptive approach for chapter 4, respectively a qualitative explorative approach (Hesse-Biber & Leavy, 2011) for the case study to present and discuss the results and finally validate the constructed hypotheses. Nevertheless, to make the results better visible by e.g. using a graph or table to show and compare direct answers, some quantitative aspects have been additionally integrated in the analysis.

3.2 Limitations

For this research, there were certain limitations which need to be acknowledged. The study was limited to a process time of in total 5 months. Due to this limited time frame, the number of issues that could be discussed was restricted. Hence not every aspect in regard to climate change and tourism interrelations and carbon offsetting has been included in this research. Although the number of interviews actually carried out is considered significant, it was intended initially to interview a larger number of international tour operators who practice climate protection. Reason for the limited number of interviews is that many tour operators did not respond or were unavailable for an interview. Nevertheless, several tour operators that did answer the interview request but were not available for a phone interview, agreed to complete a questionnaire instead. Moreover, literature in the field of tour operators' climate protection measures, their motivations and attitudes to base this study on, is still very little. The same can be said about research concerning the interrelations of tourism and climate change in Namibia.

4. Tour Operators and Carbon Management

4.1 Introduction

The key question in the discussion about making tourism more sustainable has become how to respond to the new challenges. As an integrated part of the tourism industry, tour operators around the globe become concerned with this topic and start taking responsibility. While some "pioneers" of the industry already practice carbon management, even some larger tour operators do not yet have a person responsible for environmental questions in the company (cf. Zotz, 2010). The "front running" companies often developed their own climate strategies and adopted a range of measures to reduce their GHG emissions. Despite some global players in the tourism industry now having

climate protection policies, Zotz (2010) points out that carbon management still concerns rather a niche than the mass market. The majority of “climate active” companies are based in Anglophone countries like the United Kingdom, Australia and North America, but also in Germany. This chapter presents selected tour operators and their activities, and thereby sheds light on various possibilities of tour operators to contribute to climate protection. The focus in the interviews with the companies is on carbon offsetting and their preferences for offsetting projects as well as on the practical effects of alternative mitigation measures

4.1.1 The Role of Tour Operators in Mitigating Climate Change

Tour operators²⁴ play a central role in the framework of tourism and climate change. As they combine several tourism products into packages, tour operators can manipulate carbon footprint of tourists, e.g. by increasing the length of stay and thereby reducing the average GHG emission per day (e.g. UNWTO & UNEP, 2008; Zotz, 2010). Despite the current tourism trend of shorter and more frequent stays, UNWTO experts conclude that tour operators are important for raising awareness among customers and furthermore possess significant influence on shaping the tourism demand side. For example, tour operators could develop packages that on the one hand meet the desires and needs of their customers, but on the other hand are less carbon intensive (Dubois & Ceron, 2008). Zotz (2010), however, describes the present situation of tour operators as being in a predicament in regard to climate change. He points out that tour operators mostly do understand the necessity of GHG reductions, also in regard to the long-term success of their own products and to economic success. However, for effective climate mitigation measure, a change in tour operators’ current business models would be needed that may appear counterproductive to the business in the short term. Especially when long-haul flights are included in a large part of the product portfolio, an adequate reaction to climate change is more complex for tour operators than for other tourism businesses. It is therefore vital for tour operators to adopt a systematic and effective climate strategy that includes the implementation of a carbon management system. In addition to mitigating their climate impact, carbon management is also a key strategy for tour operators to manage adaptation measures needed to cope with direct and indirect impacts of climate change (Strasdas, 2010). As carbon management is a voluntary approach that tour operators are not required to take up, it can be regarded as a part of their “Corporate Social Responsibility” (CSR). CSR is a concept that “refers to the integration, on a voluntary basis, of social and environmental concerns into operations of companies and into the interaction with their stakeholders” (Zotz, 2010:39). The following six steps show the framework of a carbon management system in the same order they can be put into practice, according to Strasdas, (2010:60):

²⁴ Tour operators are defined as “businesses that combine two or more travel services (for example, transport, accommodation, meals, entertainment, sightseeing) and sell them through travel agencies or directly to final consumers as a single product [...] for a single price.” (UN & WTO, 2010:58)

1. **Measure** and **analyse** emissions (Where and when do emissions occur? In which departments, by which products or activities? For which reasons?)
2. **Eliminate** or **avoid** emissions by foregoing energy-intensive products or activities (such as scenic flights or weekend trips by aeroplane)
3. **Reduce** energy consumption (by increasing energy efficiency of appliances, processes)
4. **Substitute** fossil energy sources with renewable energy sources (e.g. through fuel switch or alternative electricity providers)
5. **Offset** remaining emissions by investing into certified compensation projects elsewhere
6. **Communicate** carbon management to customers, employees, suppliers and other stakeholders

Even though the focus of carbon management is on avoiding and reducing GHG emissions, especially when striving for “carbon neutrality”, offsetting still plays a role as remaining emissions of some business operations cannot be avoided (e.g. STA; 2011). To compensate their emissions, tour operators can either use an offsetting agency or alternatively operate an own offset project. By talking about carbon management, the different roles of outbound compared to inbound tour operators has to be kept in mind. A survey by Driscoll et al. (2007) with 67 tourism companies that were generally devoted to sustainability, showed that inbound tour operators’ climate mitigation measures focused on local activities such as reducing transportation, using public transport or low-emissions vehicles. Outbound tour operators, by contrast, generally used internal management measures and carbon offsetting. In this regard, it also needs to be considered that tour operators work as intermediaries between consumers and tourism suppliers, and carbon emissions will mostly be generated by “third parties” (Zotz, 2010). Tour operator’s influence on the climate friendliness of their suppliers is often limited, especially in destinations where tour operators have no choice of transport or accommodation providers because of few alternatives. Tour operators’ role in climate mitigation consequently becomes often the one of a facilitator and “the question of how they motivate their business partners to measure and reduce climate impacts appears to be of major importance” (Zotz, 2010:55). A vital incentive for supplier and tour operators alike is the benefit of economizing energy costs by reducing the consumption or replacing fossil fuels with renewable energies. Also risk reduction and increasing competitiveness of a service provider seen on the market as responsible are further motivating benefits (cf. Scott & Becken, 2010).

4.2 Examples of “front running” Tour Operators

For this study, several tour operators from different countries were selected and contacted. Eight tour operators responded and accepted an interview or completed a questionnaire instead. Out of these eight companies, two were inbound, four were outbound tour operators, and two “global players” were acting as in- and-outbound operators. These companies range from very small

operators, targeting a specific niche market, to the global players targeting the mainstream tourism market. They were selected because their common involvement in climate protection measures including carbon-offsetting projects. Although most companies that were contacted are from English-speaking countries and Germany, the response rate was far lower from tour operators in America and the UK in comparison with German and Australian companies. This resulted in interviews with four German, two Australian, one British and one Chinese tour operator. Coincidentally these companies can be considered as “front runners” within the tour operator tourism sector. They are, however, not explicitly chosen as “best-practice” examples, rather than as a selection of businesses representing different sizes, target markets, global areas and especially different climate protection strategies. However, there are obviously many more tour operators with similar carbon management programs and commitment to climate change.

4.2.1 The Companies

Before the interview results are presented and discussed, the tour operators are briefly introduced (in alphabetical order):

avenTOURa (Germany)

Founded in 1995, avenTOURa is a travel specialist for Cuba and Latin America. Since 2006, the product portfolio of in total 65 culture or activity focused tours for small groups and individuals also includes further destinations worldwide. Environmental protection has been one of the company’s business objectives from the beginning, while climate protection was added about 6 years ago (Daniels, 2011). For every sold tour that includes air travel, avenTOURa donates 10€ into a climate protection fund that supports environmental and climate protection projects in its destination countries. avenTOURa is a member of *forum anders reisen* and received a certification for its cooperate social responsibility (CSR) in 2009 (www.aventoura.de, 2011).

Chamäleon – Reisen (Germany)

Chamäleon Reisen, founded in 1996, offers small-group tours with maximal 12 travellers to 26 countries. Since the establishment of Chamäleon Reisen, Sustainability and climate protection have been core values of its philosophy. Chamäleon Reisen sponsors social and environmental projects in the destination countries and, additionally, purchases and protects 100 m² of rainforest for each of the about 7800 yearly customers. For this purpose, the company set up a “rainforest foundation” in Ecuador, in cooperation with its local subsidiary (www.chamaeleon-reisen.de, 2011).

Colibri Travel (Colibri UmweltReisen, Germany)

Colibri Travel, a brand of Colibri UmweltReisen, is a small tour operator founded in 1995 in Germany. Colibri Travel specializes in small group travel and tailor-made “innovative and environmental friendly” tours for individual travellers to Costa Rica and Uganda, but also offers tours, especially whale-watching ones, to many other destinations worldwide (www.colibri-travel.de, 2011). Climate protection projects have been a USP of Colibri Travel/UmweltReisen since the very beginning. The company initiates new tree-planting projects every two to three years and cooperates with different organizations such as the WWF or a foundation that works under the frame of a UNEP programme (Gehlen, 2011).

Expert Africa (UK)

Expert Africa is based in the UK and belongs to Sunvil Holidays, an privately owned British tour operator founded in 1970. Since 1991, the Africa department of Sunvil Holidays²⁵ offers tailor-made trips to Southern and East Africa to its international customers. A few small-group tours are also available to Namibia and Botswana. Cooperating mostly with the “Tourism Industry Carbon Offset Scheme” (TICOS), Expert Africa started in 2008 to donate £20 per business flight to Africa to compensate their carbon emissions. Since 2009, also every customer invoice entails an offsetting donation of £20 (www.expertafrica.com, 2011).

Intrepid Travel (Australia)

Intrepid Travel, founded in 1989, has grown from a small to a mid-sized tour operator that employs over 600 staff and has about 100.000 customers taking part in over 400 different trips per year. Intrepid travel offers mainly guided small-group tours to more than 90 destinations worldwide emphasising on adventure, nature-based activities and cultural immersion (www.intrepidtravel.com, 2011). Sustainability and responsible travel have been core principles since Intrepid Travel’s establishment and a special focus was put on carbon management. Two fulltime employees (a responsible tourism manager as well as a carbon-offset manager) are in charge of the company’s environmental and carbon activities and ensure continuous reduction of carbon emissions. Whenever practical, Intrepid Travel uses public transportation on its tours to save emissions. In addition to compensating all business travel emissions, the company aims to become completely carbon neutral (Intrepid Travel, n.d.). In 2010, already 80% of the trips’ carbon emission from in-trips transportation, accommodation and food were offset. Intrepid Travel also established a non-profit foundation that “actively supports health care, education, human rights, child welfare, and sustainable development in the areas Intrepid Travel visits” and recently won the Global Tourism Business Award for “best practices in sustainable tourism at a large company level” (WTTC, 2011:1).

²⁵ The company operates only since 2005 under the name “Expert Africa”.

Small World Journeys (Australia)

Small World Journeys was committed to sustainability tourism right from the establishment of the company in 2008. Environmental protection measures and the principle of carbon neutrality were included in the tour operator's objectives (Prichard, 2011). Small World Journeys is a member of the "Adventure Travel Trade Association" (ATTA), "The International Ecotourism Society" (TIES) and "Sustainable Travel International" (STI)²⁶. Under the maxim of "we are a small tour company but with a big network", the company caters with its tailor-made tours and guided small group trips to individual travellers, families and groups of young people (www.smallworldjourneys.com.au, 2011).

TUI Deutschland (Germany)

TUI Deutschland GmbH is a subsidiary of TUI Travel PLC and one of the leading tour operators in Europe. TUI Travel is active in 180 countries and serves over 30 million customers a year. In Germany the company employs more than 5000 staff, including 1650 at the headquarters in Hanover. TUI Deutschland's product portfolio caters for a wide range of target groups. Jointly, with its several subsidiary tour operators in Germany, its international hotels and resorts and own airline TUI fly, TUI Deutschland is involved in all tourism markets. As part of the TUI Travel PLC, TUI Deutschland is member of the Tour Operators Initiative for Sustainable Development (TOI)²⁷ and is involved in various environmental and climate friendly initiatives, such as offsetting flight emissions of its employees' business travel. TUI Germany maintains an own environmental department to advance sustainable development and regularly publishes sustainability development and performance reports (www.tui-deutschland.de, 2011).

Wild China (China)

Since the incoming tour operator Wild China was founded in 2000, sustainability was part of the company's core principles. As a medium sized tour operator with about 50 employees based at the headquarters in Beijing, WildChina strives for responsible, ethical and "green" business practices (WildChina, 2011). WildChina has partnered with the WWF and the tour operator's founder, Mei Zhang, is active on the Board of Directors at TIES. The company offers adventure and luxury tours that are described as "ecologically sensitive journeys to all corners of China" (wildchina.com, 2011). Additionally, volunteer and educational holidays for students are organised.

²⁶ **Sustainable Travel International (STI)** is a not-for-profit organization that is "dedicated to providing education and outreach services that help travelers, travel providers and destinations support environmental conservation and protect cultural heritage while promoting cross-cultural understanding and economic development" (Source: www.sustainabletravelinternational.org, 17.09.2011).

²⁷ The **Tour Operators' Initiative for Sustainable Tourism Development (TOI)** is an association that "unites tourism stakeholders from around the world to promote the development, operation and marketing of tourism in a sustainable way" (Source: www.toinitiative.org, 17.09.2011).

4.3 Interview results

4.3.1 Tour Operators' Motivations for Climate Commitment

„We are a part of an industry that is a growing contributor to Climate change and therefore feel that as a tour operator we should be taking responsibility for the emissions we create as a result of our business.“

Intrepid Travel - Mitrovic, 2011

The interviewed tour operators can be divided into two groups: companies who embraced climate protection goals right from their establishment and those, who started to adopt mitigation measures within recent years. Their stated motivations, however, are now very similar, except that tour operators who started later do not mention climate protection measures as a unique selling point (USP) anymore. The main motivation for the majority of the tour operators is to take responsibility for the GHG emissions that are generated due to their business activities (see e.g. quote above). Tour operators obviously recognize their own emission as part of the climate change issue, and try to voluntarily mitigate their impacts: *“WildChina has been operating for 10 years now and one of the core motivations from the beginning was to minimize the negative impacts of tourism”* (Woods & Tan, 2011) respectively compensate to avoid contribution: *“We feel it is our duty as a tour operator to ensure we are not contributing to environmental problems and to offset our activities whenever possible”* (Prichard, 2011).

Economical interests in regard to impacted destinations are solely mentioned by Intrepid Travel as a motivation: *“Climate Change will affect the tourism industry so it's a risk to the entry or continuity of our travels to certain destinations and therefore it is in our interest as a business to address the issue”* (Mitrovic, 2011). A further motivation stated by several companies is the rising awareness of travellers regarding environmental impacts, a point that *“will become more and more important to customers”* (Mitrovic, 2011) and lead to the position that *“as a tour operator we should do something”* (Woods & Tan, 2011). Several operators point out that climate protection activities are increasingly used in marketing activities in recent years, though this is still considered as an “add-on” and not as the main motivation or reason for the climate involvement (cf. Andersch, 2011; McIntyre, 2011). Philanthropic motivations are only stated by WildChina and in regard to supporting small scale offset projects to *“give back to the regions and people we are travelling to”* (Woods & Tan, 2011).

4.3.2 Customer' Awareness of Climate Change

“The majority of clients seems to be sensitive toward the issue of climate protection and chooses Colibri as tour operator also because of its activities in climate protection.”²⁸

Colibri Travel - Gehlen, 2011

Overall the tour operators have the impression that most of their customers are aware of climate change and the negative impacts of travelling on it. Intrepid Travel, however, is the only company who conducted surveys that supported this assertion (Mitrovic, 2011). Woods & Tan (2011) from WildChina points out the difficulties of estimating the customer' awareness because *“it really depends on the type of clients and the focus of their trip”* and specify that *“school groups are of course very aware of climate change, the private family travellers rather less”*. At TUI Deutschland it was noticed that the climate awareness of its customers seems to fluctuate depending on external factors: a decrease was observed during the economic crises in 2008/2009 and an increase again after the nuclear catastrophe in Fukushima in March 2011 (Carlé, 2011). According to Carlé, the demand of more sustainable tours rises, and climate change is assumed to be an important issue for 40% of the clients. Nevertheless, he notes that customers expect climate commitment from tour operators but are not willing to pay more because of it. This is also noticed by Daniels (2011) who states that despite their climate awareness, hardly any client is prepared to pay for voluntary compensation.

4.3.3 Carbon Management and Climate Protection Measures

The way of addressing climate change varies among these exemplary tour operators. While some companies, such as Intrepid Travel, have established a comprehensive carbon management plan and follow the ambitious goal of becoming carbon neutral, other companies do not yet measure their GHG emissions, but they donate a flat rate per customer to “compensate” for the emissions. In general, this is the one mitigation measure that almost all tour operators have in common: the compensation of travel related GHG emissions. Six out of the eight companies also offset their business trips, the remaining two operators stated to plan to do so. Furthermore, the majority either offers their customers to voluntarily compensate their GHG emissions or includes a offsetting fee into the price of their tours as specified later in this section. The larger companies, in particular TUI Deutschland and Intrepid, but also WildChina, are publishing sustainability reports that include emission savings resulting from their mitigation programmes.

²⁸ Translated by author from the original quote: „Der Großteil der Kunden scheint dem Thema Klimaschutz gegenüber sensible zu sein und wählt Colibri als Reiseveranstalter u.a. auf Grund seiner Aktivitäten im Klimaschutz aus.“)

Specific training for tour guides and staff members in environmental and climate friendlier travel behaviour is another climate protection measure that several operators mentioned. The same applies to suppliers and cooperation partners of some tour operators, e.g. Intrepid Travel: *“we are working currently with Rainforest Alliance in South America to provide our suppliers on ground with training on how they can operate their businesses more sustainable”* (Mitrovic, 2011). TUI Deutschland offers workshops etc. and consultant services for partner hotels that are interested in becoming carbon neutral. New contractual hotels are obliged to let their business be checked by *Travelife*,²⁹ which includes energy efficiency tests and measurement of energy consumption.

In the Office

Although this area of emission generation is not specific to the tourism industry and its contributions are a small fraction of the business impact that is characterised mostly by transportation, it is still considered an important aspect of sustainable business practice. Asked about climate protection activities at their offices, the tour operators mentioned most:

- Reducing paper waste, using recycling paper
- Reducing energy consumption in the office
- Obtaining “green energy” (all German and Australian companies)
- Activities to raise climate awareness among employees

Further activities brought up include for example compensating the emissions originating from printing and mailing travel catalogues or providing tickets for public transportation to work.

On the Tours

“We try to be a pioneer in ecotourism in china and also show travellers to China what a sustainable way to travel is by having smaller groups and therefore also a smaller impact on the environment”

WildChina - Woods & Tan, 2011

Except for the largest tour operator focused on main stream tourism, all other companies only offer group tours with a small number of participants (e.g. max 12 or 18 travellers). However, whether or not a small group size, should be counted as a climate protection measures or not it not obvious and will be discussed later on in this chapter. On the tours themselves, several tour operators said that

²⁹ The Travelife Initiative “offers industry-wide standards for sustainability management and provides guidance and support. Moreover, Travelife provides tour operators with an integrated set of instruments and tools in order to effectively promote sustainability” (Source: www.travelife.eu, 18.09.2011)

they reduce emissions generated by transport, e.g. by replacing flights with ground transportation and two companies also use public transport whenever possible on its tours. One operator mentioned they included train tickets to reach the airport and, at the holiday destinations, use fuel efficient coaches. Climate friendlier activities are predominately to exclusively integrated in the tour itineraries by most tour operators, such as hiking, biking or kayaking instead of quad biking or jeep cruising.

Concerning the accommodation during the tours, most operators claimed to take climate friendliness into consideration when choosing new partners, such as preferring hotels with natural ventilation. However, some companies add that this is not always possible, as choices of accommodation are limited in some of their destinations.

Carbon Offsetting

The interviewed tour operators follow different strategies in regard to financing the compensation. These can roughly be summarised as:

- Compensation is completely optional for their clients (2 operators)
- The sum to offset the flight, the tour, or both, is already included in the product price or added to the invoice (4 operators)
- A fixed donation per customer per tour is provided by the company to climate projects (2 operators)

Both companies that encourage clients to voluntarily compensate for their travel emissions do not yet include this option into the booking process itself, respectively only in the case of booking a flight, but not for booking a package holiday. Clients still have to follow links to external websites in order to compensate. To increase the small percentage of clients that do actually compensate, these two tour operators are working on integrating offsetting into the booking procedure (Carlé, 2011; Woods & Tan, 2011).

The two Australian companies calculate and offset the GHG emissions that are caused during their trips via an external offsetting agency. Flights to and from the travel destination can optionally be offset by the clients. One of the companies states, however, that “*not many the passengers are willing to add an additional payment to their airfare*” (Mitrovic, 2011). The British tour operator Expert Africa adds a flat sum into the invoice that is measured to roughly compensate the customers flight to and from the destination. In this case, the compensation is added in an “opt-out” way, but the managing director, McIntyre (2011) reveals that “*very few clients actually choose to take it off the invoice; most of the customers pay the additional fee*”. At Colibri Travel, flight emissions of all journeys are being calculated and included in the product price, but this time in

combination with an “add-on” instead of “opt-out” option. During the booking process, the customers are asked if they would like to donate an additional sum to the reforestation project. According to Gehlen (2011) about 35% use this option.

Two outbound tour operators make a fixed donation to their own climate projects to “compensate” their tours’ GHG emissions. This donation is in both cases independent of the destination or travel length, but while avenTOURa makes a contribution of 10€ per customer and tour, Chamäleon Reisen purchases 100m² of rainforest per customer and tour. avenTOURa, however, informs its customers that not all emissions are fully compensated by this donation, and encourages them to additionally buy carbon offset or donate an extra sum to the fund. So far, none of the options are well accepted by the clients (Daniels, 2011).

Table 5 - Overview of Tour Operators' Offsetting Projects³⁰

Company	Ownership of offsetting projects	Type of off-setting projects	Project remarks
avenTOURa	Mainly own projects But also cooperation with atmosfair	Reforestation and renewable energies	<ul style="list-style-type: none"> - Own foundation manages projects - Reforestation projects in Peru - Investments in commercial timberland projects in Costa Rica - Hydropower projects in Honduras, Solarpower in Peru - 10€ per booked air travel tour is donated to fund - Clients are encouraged to compensate flight emissions via external offsetting agency or donate to fund - Business travel is offset
Chamäleon Reisen	Own projects	Forest protection	<ul style="list-style-type: none"> - Rainforest areas are bought and protected in cooperation with local partner - Currently forest is bought in Ecuador; the previous project was in Costa Rica - Donation for the purchase of 100m² rainforest per person is included in the price of each tour
Colibri Travel	Own projects and cooperating	Reforestation	<ul style="list-style-type: none"> - Current project in Nepal, cooperation with a foundation and with local partner (run under UNEP program)

³⁰ Information are taken from the interviews and extracted from the websites.

	with environmental protection foundations		<ul style="list-style-type: none"> - <i>Tree-planting projects are supported for 2-3 years, than projects are changed to initiate new projects</i> - <i>Compensation included in the price, clients can choose to donate more to the project during booking process</i> - <i>Donation to offset business travel</i>
Expert Africa	TICOS	Energy efficiency	<ul style="list-style-type: none"> - <i>Fuel-efficient and solar cooking stove projects in South Africa</i> - <i>Donation of £20 included in every invoice that customers can „opt out“</i> - <i>Donation for business trips</i>
Intrepid Travel	Cleaner Climate	Renewable energies	<ul style="list-style-type: none"> - <i>Hydropower and biomass projects in India, China and Thailand</i> - <i>Emissions from tours are offset (excluding flight to destination)</i> - <i>Flight compensation optional for clients</i> - <i>Business travel is compensated</i>
Small World Journeys	STI	Renewable energies and energy efficiency	<ul style="list-style-type: none"> - <i>Projects that are CDM Gold Standard verified</i> - <i>(Additional, but not to compensate: reforestation and rainforest protection)</i> - <i>All emissions of the tours and office are compensated</i> - <i>Flight compensation is optional for clients</i> - <i>Business travel is offset</i>
TUI Deutschland	MyClimate	Energy efficiency (Reforestation)	<ul style="list-style-type: none"> - <i>Energy efficient cooking stove projects in Kenya and Peru</i> - <i>(Reforestation project on Mallorca, primary developed as an environmental, not explicit as an offsetting project)</i> - <i>Compensation is optional for clients</i> - <i>Business travel is offset</i>
WildChina	Climate Action	Renewable energies	<ul style="list-style-type: none"> - <i>Small hydropower project,</i> - <i>Compensation is optional for clients</i> - <i>Office emissions are offset</i>

Cooperation with Offsetting Provider vs. Own Compensation Projects

The majority of tour operators offset their emissions through a professional offsetting agency, as shown above in table 5. The companies explain this choice similarly, mostly stating a lack of proficiency in that field and or resources:

- *“We don’t have core expertise in this area to manage our own projects, so we believe it is important to source a partner who has this expertise”* (Intrepid Travel - Mitrovic, 2011).
- *“We are a travel company and that is our expertise, we are not into reforestation, for instance and we don’t have the right expertise to manage carbon offsetting projects”* (WildChina – Woods & Tan, 2011).

One company also explains the decision to outsource carbon offsetting because of its size: *“We are a small company – this would be too difficult”* (Small World Journeys – Prichard, 2011).

Being asked about the criteria they used to choose their offsetting partner, the tour operators replied to have selected the specific compensation agency because:

- of its **reliable** and **professional** method of operating
- of its **non-profit** approach to secure that the donations reach their destination
- of the **approved calculation** method of GHG emissions
- only **Gold Standard verified** projects are supported
- they are independently **audited** by a 3rd party
- the operators prefer to have a partner in the **same country** as their own company is based
- they provide **cost effective** carbon credits

Two of the interviewed tour operators run smaller “climate project” on their own in addition to purchasing certified offsets. TUI Deutschland, for example, also carries out a reforestation project on Mallorca. This project, in which one tree is planted for every customer that travels to the Spanish island, is primarily established and only communicated as an environmental conservation project, even though it also contributes to climate protection. According to Carlé (2011), this project works better in regard to raising funds than TUI’s other compensation projects, as it is “more concrete” for the clients. The second company pursuing two tracks in carbon offsetting is avenTOURa. On one hand, they purchase certified carbon credits, but on the other hand they additionally establish their own projects that quickly lead to a visible success, and also provide the possibility to maintain direct contact with the project. They plan to pursue this strategy further in the future.

The companies that operate their own compensation projects set up climate protection foundations or registered associations to develop and manage the sponsored offsetting projects or work together with local partners. All three are German outbound operators that for various reasons decided against cooperating with an offsetting agency. The main reason for these companies not to work with offsetting agencies is that they prefer to support projects located in the countries they travel to and that can be included in their itineraries (cf. Daniels, 2011; Gehlen, 2011; Andersch, 2011). Gehlen (2011) argues that development and support of own projects would fit better to Colibri Travel's philosophy and highlights that only with own projects, the company can influence the project right from the beginning and survey its quality. The third operator, Chamäleon, also stresses that by managing a "private" project the company can secure that the donations reach the project and knows exactly what they are used for.

A further advantage of supporting their own compensation projects that has been pointed out by all three operators is a better marketing potential compared to investing in "anonymous" projects and being only "one of many" sponsors. They argue that a specific, well known and visible project would be easier to communicate to their customers as it was less abstract and better comprehensible. Nevertheless, Daniel (2011) of avenTOURA admits that not much fact-based emission compensation can be made through these small projects, as they usually do not fulfil any standards.

Preferences for Offsetting Projects

"We chose this project because we wanted to support something small. We won't be buying a whole lot of carbon credits, but we wanted to see that our carbon credits have a positive impact. The project is in western china where we do a lot of travelling to."

WildChina – Woods & Tan, 2011

The tour operators mention different reasons for choosing specific types of compensation projects. Great importance is generally attached to high quality projects that create, apart from saving emissions, also social and economical co-benefits for the local population. The tour operators running own projects seem to prefer forestry projects, while all other companies either support energy efficiency or renewable energy projects. Potential reasons for that are discussed later in this chapter. When using an offsetting agency, tour operators usually have a limited choice of projects they can select. Due to these proposed projects, the companies are less flexible in regard of project type and location. From the portfolio of their offsetting partners, two companies have chosen to sponsor the construction, distribution and installation of fuel-efficient cooking stoves and/or solar cookers in developing countries. For TUI Deutschland, the decision was determined by the high

quality of the projects and the additional social benefits for the local people, such as job creation and better health conditions (Carlé, 2011).

While some tour operators prefer small projects where they are the only sponsors, others do not seem to mind supporting a project together with others. Several operators also explain their decision for a project or specific size or developing status because they want to be able to see the impacts of their donations. Intrepid Travel, for instance, explicates: *“we have chosen to purchase carbon credits from existing projects rather than buying carbon credits from future projects. This is because we want the impact to be immediate”*.

The three tour operators that manage their own offsetting projects in reforestation emphasize a secured future of the trees when planning a project. All three operators cooperate with local partners and also involve the local population in project activities to ensure the projects' sustainability. Gehlen (2011) points out the importance of a second usage of the trees when choosing a project. Colibri Travel currently supports a reforestation project in Nepal, where future crops of the trees, such as coffee beans or fruits will provide the local peasants with an additional income. This adds value to the trees for the local population and hence helps to protect them. Chamäleon Reisen has chosen a different approach towards “compensation emissions” and purchases rainforest areas to save them from logging. These plots are bought in the name of their customers and put under nature protection. Chamäleon then issues a numbered “climate protection certificate” with which they can check online the location of their personal rainforest square.

Almost without exception, the interviewed companies prefer supporting offsetting projects that are located in countries they travel too, regardless of whether the tour operators visit the projects during their tours or not. Several companies include a project visit into their tour itineraries and one company states that this possibility was a pivotal criterion for their project choice. Overall, all tour operators show interest in showing their clients on-site where their donation is used for, but in many cases the compensation projects are in isolated areas and too far away from the travel routes: *“we would like to start including these projects in our itineraries, however, given that most projects are based in relatively remote projects, it is hard to weave them into our trips”* (Mitrovic, 2011).

4.3.4 Communication of Climate Commitment

“We display “carbon offset” trips on our website and our brochure to highlight a point of difference to our competitors. We have also won quite a few awards this year because of our commitment. We also use these awards to promote our brand.”

Intrepid Travel - Mitrovic, 2011

All tour operators use their websites and many also their travel catalogues to communicate their climate mitigation efforts. Colibri Travel, for instance, primarily uses its catalogues to present the currently supported offsetting project and show the carbon footprint of each particular tour (Gehlen, 2011). The extent of the provided information, however, varies. While some operators state that they use their climate commitment explicitly for market purposes, a few operators also explained that they mention it on their website, but do not use it for the sake of promotion. One of these operators describes its approach with “*we are not pushy with our eco-credentials and do not list them in every piece of marketing material we have*” but then, maybe recognizing the idle marketing potential, adds “*perhaps we could advertise those aspects a bit more*” (Prichard, 2011). Also WildChina states to be “*working on making it more visible looking for ways to make our sustainability efforts more transparent*” (Woods & Tan, 2011).

In relation to marketing activities, one tour operator emphasizes that the topic of climate change and climate protection is very complex and hardly tangible for the customers. Hence, Carlé (2011) concludes that the challenge will continue to lie in exploring offsetting projects that are less abstract. Clients should feel directly spoken to by the projects and encouraged to contribute their share to climate protection. In direct comparison, the marketing potential of TUI’s own reforestation projects in Mallorca is higher and more effective than promoting the offsetting projects TUI supports in cooperation with *myclimate*. It has been observed that the clients’ willingness to donate is remarkably higher for a particular tree planting project in a destination they travel to, than to a compensation project that is less tangible.

How important this link between marketing and demand of climate friendly can be for tourism products was stressed by Andersch (2011): by more intensively addressing the topic of climate change in advertisements and travel agencies, clients will ever more take notice of it. This in turn can increase the observed trend that climate protection as part of sustainability becomes a vital aspect when selecting a tour operator.

4.3.5 Acceptance, Feedback and Effects of Climate Protection Activities

“In general, clients are appreciative of our efforts, but I would say that price and activity types are still the biggest factors in deciding which tour operator to work with.”

Small World Journeys - Prichard, 2011

In relation to the acceptance and willingness to pay for carbon offsetting of their customers, the tour operators depicted very different experiences. Companies that included the compensation fee in the price had a very high acceptance of it, even if the fee was on an “opt-out” basis, almost all

travellers were willing to pay. Voluntary compensation, which was offered during the booking process, was far less used by travellers. If only a link to another webpage was offered to offset, tour operators stated the percentage to be marginal, respectively they did not have any data. Two operators that also use travel agencies as a distribution channel, observed a far lower increase in demand of sustainable and climate friendlier holidays in travel agencies than recognized in total by all distribution channels (cf. Andersch, 2011; Carlé, 2011). Even though clients can offset their travel emissions in TUI's travel agencies, less than 1% of the customers actually use this option. Carlé (2011) remarks on the challenge to increase this number, because despite training on the topic, carbon offsetting is still not as well received in travel agencies as would be preferable from a climate protection standpoint. He concludes that one of the reasons for the low sales of carbon offsets may be the lack of commissions for the agent selling them.

There is an overall agreement among the tour operator that customers acknowledge their climate commitment. However, while several companies state that they have received very positive feedback from their clients, others reveal that they did not get any specific feedback regarding their climate protection activities. The tour operators agree that sustainability in general rather than explicit climate friendliness belongs to the decisive factors when selecting a tour operator. While some respondents do not yet believe that sustainability and climate protection influences the booking decisions, other tour operators suppose it already plays a role among their customers.

Andersch (2011), at Chamäleon Reisen, highlights that its rainforest projects were especially well received by the customers because the climate activities are directly visible and, additionally, climate certificates were handed over to the clients. It is believed at Chamäleon that its climate protection activities have a positive influence on the bookings and general customer satisfaction. However, this assumption cannot be proved as it is not specifically surveyed. Intrepid Travel, in contrast, assesses the effects of its climate activities in detail. To "gauge whether the market was ready for a green travel product", Intrepid released 38 so called "carbon offset trips" in 2009. GHG emissions of these tours had been measured (from in-trip transport, accommodation and food) and a compensation fee was included in all prices of these tours. After a test period of one year, Intrepid came to the conclusion that "*adding the carbon offset didn't affect bookings either way. Overall, we didn't find that adding offsets to our trips affected sales in a negative way and were confident to roll out carbon offsets on all our trips*" (Mitrovic, 2011). At the same time, Intrepid surveyed that their "*customer satisfaction/enjoyment rating hit 4.66 (out of 5) and our responsible travel rating (given by passengers) has gone up to 4.53 (out of 5)*". Another operator did not remark any changes in customer contentment or on their booking numbers that could have been attributed to the implementation of climate protection activities.

Regarding further potential effects of their climate activities, one operator emphasized that staff and tour leaders would “*feel proud to be working for a company that is addressing the issue of Climate Change so passionately*” (Mitrovic, 2011) and adds that “*winning the awards this year which recognized our efforts also contributed to staff pride*”. Moreover, additional media attention was observed due to the company’s climate activities which lead to opportunities to “get to speak at different functions as *best practice case studies*”.

Apart from receiving a some negative comments from “climate change sceptics”, only one tour operator mentioned an economically unsuccessful activity of its mitigation efforts. Because of insufficient demand, the roll-out of climate neutral tour offerings failed in the market and the company terminated this specific offer. The operator concluded that to offer all tours as carbon neutral would be too early and thus harmful for the business at the stage, as those programmes would not yet prevail on the market.

4.4 Discussion & Conclusions

4.4.1 Discussion

This chapter aims to discuss the previously presented interview results as well as to answer the research questions. In the last section also conclusions will be drawn that will be used for the adjoining case study.

Tour Operators’ Motivations & Customers’ Awareness

Asked about the main motivations behind their involvement in climate protection, most tour operators declared the responsibility for GHG emissions caused by their business activities as a central reason. As the portrayed tour operators are selected because of their climate commitment, their awareness of contributing to climate change is not astonishing. It is surprising, by contrast, that tour operators hardly mentioned competitive advantages as motivations, even though almost all operators believe that the topic of climate change will become more important for travellers in the future. This position might explain the outcome that three out of the eight companies’ responded “not at all” or “hardly” when asked if they would use their climate commitment for marketing purposes. Comments such as “*perhaps we could advertise those aspects a bit more*” (Prichard, 2011) could yet signify that operators realize additional opportunities to communicate their climate activities. It appears that only a minority of the interviewed companies exploit the full marketing potential. A good example hereby is Intrepid Travel that received a number of awards because of its outstanding carbon management and climate protection efforts. Intrepid Travel does not only use these awards and the term “climate neutral” to market its tourism products, but also benefits

through increased media attention. It was noticed that especially those companies that effectively communicate their commitment, stressed that marketing opportunities would be an “advantageous add-on”, but not the motivation behind their climate activities. In this regard, also possible effects of social desirability need to be taken into consideration, meaning that interviewees’ replies could be influenced by general opinions of society. It could be speculated that economical reasons as motivations are thought not to be appreciated as a favoured answer.

The tour operators already noticed an increasing consciousness of especially environmental, but also climate matters by travellers. Moreover, a few operators assume that their companies’ environmental performance might be one out of several booking decision factors for their customers. Both assumptions also correspond to the findings of previous studies as discussed in chapter 2.6. In the face of that, customers’ rising awareness does not seem to be a key motivation for the majority of operators. It could rather be discerned that climate mitigation measures are regarded as a part of the environmental activities of the tour operators or, more generally, as part of the companies’ CSR. It appeared to be self-evident for many of the operators to mitigate wherever possible, with no specific motivations being necessary to explain their commitment to climate protection. This was particularly observed by tour operators whose company philosophy included environmental objectives since its foundation. It is also remarkable that half of the interviewed companies stated not having received any feedback from their customers. One could get the impression that these operators pursue their climate activities anyway, and are not especially interested if their customers take notice of it. Receiving no feedback could also show that the companies neither include related questions into their feedback forms nor do they sufficiently communicate their climate sustainability actions for customers to remark on them. For the other tour operators who received feedback, the, without exception, very positive reactions could be incentive to expand their mitigation measures. By analysing the interviews, a correlation between marketing strategies and feedback became apparent. Those tour operators that clearly communicated their climate commitment, awards and offsetting projects to their clients, also mentioned having received positive feedback from them. It was also obvious that companies managing own “offsetting” projects generally communicate their climate protection activities more intensively and also obtained more feedback than tour operators that cooperate with offsetting agencies.

Focusing again on the question of motivation: not more than one single company stated to adopt mitigation measures in regard to becoming “prepared for the future” and “securing business success”. This is especially notable, as it concerns two different aspects: on the demand side to be prepared for the expected increase of environmentally conscious travellers, and on the supply-side to decrease impacts of climate change on the travel destination. While the first aspect may already

become increasingly important for tour operators within the next decade, the second aspect also embraces long-term prospects. As mentioned in the literature review, some destinations already experience negative impact by climate change. However, GHG emissions that are now saved will not have an immediate effect on the climate because of the durability of carbon dioxide in the atmosphere (cf. e.g. Conrady & Bakan, 2008). It is also interesting to note that none of the operators mentioned economical reasons, such as saving energy to save costs, as a motivation for their mitigation measures. Apart from the reasons mentioned in regard to marketing, that might be, because the bulk of GHG emissions are emitted during the tours themselves and the (air-) transport to the destination, where tour operators currently do not see much energy reduction potential that would save them costs. However, especially the two largest operators also adopted energy saving activities at their office buildings as part of their environmental management programmes.

An explanation for the fact that only one operator mentioned philanthropic motivations, could be found by looking at further activities of the companies: almost every interviewed tour operator supports social projects or donates to charities as part of their company's philosophy. The motivation of "giving back to the people they travel to", could therefore be already "covered" by non-climate related projects and might not be a vital reason anymore for climate-specific projects.

Mitigation Measures and Offsetting Projects

As displayed in the result section, the tour operators' involvement in climate protection vary largely among the profiled companies. While numerous operators emphasized their commitment to environmental and in particular climate friendly travel, only a single operators commented on pursuing a complex carbon management plan. The principles of first measuring all emissions, followed by avoiding, reducing and only then offsetting the remaining carbon emissions were also barely mentioned by this company.

In literature, corporate carbon management is stressed to be a key foundation for any consequent mitigation measures as discussed in chapter 2. Zotz (2010) even claims that tour operators need to adopt the concept of "carbon neutrality" as a long-term principle in regard to all their activities. He further emphasizes that a key factor for success would be the commitment to climate protection of the companies' top management and the inclusion of climate objectives into the business strategies. Of the interviewed companies, the term *carbon neutral* was mentioned by two operators. These two companies are also the only ones that actually calculate and offset all GHG emissions of their tours. The fact that both companies are located in Australia, could be a coincidence, but could also be an indication of more ambitious targets in the Australian tourism industry. With only eight companies portrayed, this presumption is very vague and further research with a higher number of samples would be necessary to answer this question. The other companies are either not measuring any of

their emissions and donating a flat amount to “compensate” air travel emissions, or are only quantifying flight emissions. Looking closer at the type of operator, it was observed that the outbound operators focus on the flight emissions. In contrast, inbound operators offset tour related emissions, but also encouraged their clients to voluntarily compensate their flights to the destination. It can be argued that, in general, emissions of air transport account for the largest carbon share of tours and therefore speculate that outbound operators do not consider additional emissions as noteworthy. However, this result could be interpreted to exemplary shows the relationship of out- and inbound operators and the “unofficial allocation of carbon responsibilities” among them. Not one company mentioned if its cooperating out- or inbound operator is also adopting climate protection measures. This could be an interesting topic for further research. It can be deduced that most companies focus on their share of the GHG emissions rather than looking at the tourism product at a whole. This also points to the importance of involving all concerned stakeholder in mitigation activities.

Almost all operators emphasized that they conduct their tours with small groups when asked about climate protection activities on tour. It is obvious that smaller groups of travellers generate lower environmental impacts, as they possibly produce less waste and physical damage to the flora or disturb wildlife than larger groups. However, in regard to mitigating climate change and reducing carbon emissions it can be argued that many small groups in smaller vehicles have potentially a larger climate impact than travelling with coaches. This aspect seems not to be taken into account by the portrayed companies, maybe because travelling in small groups is part of their philosophy. On the other hand, only travelling in small groups enables the major advantage of using public transport. Two tour operators are using this option on their tour and also mentioned it as a climate change mitigation measure. Apart from one operator claiming to only use new, fuel-efficient coaches, hardly any climate actions were mentioned in regard to transportation during the tours.

All portrayed tour operators have in common a desire to offset travel related GHG emissions and, or encourage their customers to do so. The companies either offset through an offsetting agency or manage their own offsetting projects. Three out of eight companies are offsetting via a self-managed project. Nevertheless, it needs to be born in mind that the companies have partly been approached because of their specific project. Hence, this percentage may not be accurately interpreted.

Asked for specific reasons for each offsetting method, the tour operators seem to have determined opinions regarding their choices. It was noticed that companies with the same type of compensation stated very similar pros for their own way and cons regarding the other way. Table 6 shows a compact summing up of the tour operators’ explanations why or why not they prefer compensating through own projects.

Table 6 - Summary of Pros and Cons of Own Offsetting Project versus Offsetting Through Agencies³¹

	Own Project	Compensation through an Offsetting Agency
PRO	<ul style="list-style-type: none"> - <i>Success visible and project can be monitored</i> - <i>Certainty that the money arrives</i> - <i>Control over what the donations are used for</i> - <i>Control of country, location and type of project</i> - <i>Popular among tourists (marketing reasons)</i> - <i>Projects can be visited (as part of itineraries)</i> 	<ul style="list-style-type: none"> - <i>Competent, professional partner</i> - <i>Easy to use: no expertise or effort needed</i> - <i>No lead time</i> - <i>Projects are certified and verified by 3rd party</i> - <i>Co-benefits for local populations secured through high project standard</i>
CONTRA	<ul style="list-style-type: none"> - <i>Need of extra resources: time and manpower needed to develop and manage projects</i> - <i>Expertise not available</i> - <i>Projects are not certified (potentially lower quality)</i> - <i>Risk that projects are not continued when tour operators terminate the sponsoring</i> 	<ul style="list-style-type: none"> - <i>Less to no influence on project</i> - <i>Limited choices</i> - <i>Potentially “One of many” sponsors of a project</i> - <i>Projects are located in remote areas, thus cannot be visited</i>

The most important aspects for tour operators that compensate their emissions in own projects seem to concern the financing and control. These companies all stress the importance of knowing where exactly their donations go and of seeing the development that is made possible by the sponsoring. It can be argued that, for instance, *Gold Standard* certified projects guarantee the effective use of offsetting donations through third party auditing. However, the advantages of having the control over a project and the certainty that the money arrives seem to outweigh any time and effort invested.

The main explanation for choosing the cooperation with an offsetting agency was a lack of resources and expertise in relation to managing own offsetting activities. A further reason that was cited several times for supporting agency projects, is that these projects follow high standards and are verified by a third party. Both statements show that tour operators are aware of the complexity

³¹ The table comprises the interviewees' point of view, not an objective analysis.

of offsetting, different quality levels and set value of certified projects and durable compensation. Several tour operators also pointed at their companies' sizes as a reason. But by looking at all companies, it does not seem to be a question of size. The companies with own projects range from very small to very large, if one also includes the environmental reforestation project of TUI. It is rather remarkable, that all four German tour operators have own projects, while all other companies solely offset through different partners. Yet, this finding should not be overvalued as German tour operators are by far overrepresented in this small sample of example companies.

A significant advantage for self-organized projects, from the tour operators' point of view, concerns the projects' location. The companies are able to choose the country and region where their own offsetting activities should take place. This has been mentioned to be an important factor for the tour operators when choosing a suitable project. Being able to integrate a visit to the projects into their tour itinerary was stressed to be a vital aspect. It seems that tour operators not only favour observation of their sponsored project's development themselves, but also like to show it to their clients. Apart from gaining an interesting sightseeing opportunity, tour operators stated that locals also benefit from their tour group visits. It was noticed that some companies speculate on visitors' increased willingness to donate to the project they have seen, while others explicitly ask their tour guests not to donate any more as their share has already been included in the tour price. According to those tour operators visiting the projects, the travellers seem to be interested and gave good feedback. It can be assumed that not only learning about the project and what their donation is used for, but also the interaction with the local population at the project location is well regarded by travellers in the companies' target group.

Interest in visiting the projects has also been expressed by nearly all other tour operators that offset through an agency. However, this is not possible in most cases due to the remote location of the projects. These compensation projects are developed to fulfil certain sustainability standards and obviously, the agencies cannot always take touristic aspects into consideration. When accepting a project that has been proposed to the operators by the cooperating offsetting agency, it seems the companies do not regard accessibility as a key factor, but as a preferable add-on. Even if the tour operators did still not control the project, it can be hypothesized that the possibility to include the project in their tours would most likely make the project more tangible and easier to communication to the travellers.

It is apparent that tour operators supporting own projects prefer reforestation and forest protection projects, while all other companies focus on renewable energy or energy efficiency projects. That can be explained by the fact that voluntary offsetting standards that are based on CDM projects (such as GS or VER+) do not allow forestry projects for reasons described in chapter 2.4.3. Planting trees or protecting forests, however, seems to be less complex and more tangible for

tourists. The companies with self-managed forestry projects mentioned, as one reason for their choice, that these projects would be easier to communicate to their customers. Moreover, it can be assumed that less technological expertise is needed for establishing a forestry project than it would be for an energy project. Previous studies revealed that forestry projects are the most popular offsetting projects with tourists and supposedly easier to use for marketing activities (cf. Becken, 2004). As discussed earlier, forestry projects are not without criticism among climate experts. For instance, an exact calculation of emission savings is not possible. Two of the companies do not measure any emissions and it is interesting to note that one of them communicates to their clients that not all their travel emissions are going to be compensated. The other company in contrast, does not encourage their customer to further offset any emissions and claims that their own offsetting share covers all travel emissions. The third operator states to calculate all flight emissions and plants an “adequate” amount of trees. As none of the three forestry projects follow any standard or are certified by a third party, it is difficult or not feasible to verify effectively if the emissions are going to be compensated or not. For tourists, this means that a higher level of trust is necessary in the offsetting capability of the company. Visiting the projects could hereby be regarded as a way to increase the credibility. It can be assumed that travellers can comprehend the sustainability of the projects, but not its ability to “offset” their emissions. Another point of criticism is that the long-term future of the planted or protected trees is mostly insecure. It seems that the tour operators understand the problem, but do not see it as a reason not to invest in forestry projects. By working together with local partner organisations and ensuring social co-benefits of the projects, the operators address and try to minimize this problem.

Optional versus Compulsory Compensation

The portrayed tour operators follow different strategies not only in regard to *what* emissions are offset and *how* this is arranged, but also in relation to how the money is finally raised. The mechanisms range from including the climate contribution into the tour price, either fixed or as an “opt-out” option, offering voluntary compensation of the emissions during the booking process, which can be voluntarily paid by the travellers, to just adding a link to an offsetting agency on the website. The interview results clearly revealed a much differentiated picture of travellers’ willingness to pay. It is apparent that some companies receive more voluntary payments for their offsetting projects than others. Obviously, those operators who include the compensation fee in the price also obtain the highest number of clients participating in “carbon offsetting”. This is especially vital for companies that manage an own project and rely on regular and predictable donations. Therefore it is little surprise that three out of the four operators that comprise a fee or donation into the price are actually running own projects. Even though some tour operators mentioned the price sensitivity of their customers, according to these companies, adding the offsetting costs did not lead to fewer bookings. It can be speculated that this price hike did not

affect the booking thanks to a successful communication strategy and full transparency. Several tour operators state that they do not want to put any pressure on tourists to offset or cause bad “climate conscious” feeling. They rather try to communicate their climate activities and offsetting projects and encourage their clients to voluntarily offset their travel emissions.

The interview results, however, show that companies that do include the offsetting fee or donation received very good feedback from their customers. A hypothesis could be that “bad conscience” does not arise as tourists know that they already automatically “compensated” for the emissions by paying the normal tour price. Even from the tourists’ view it can be argued that including the fee puts less pressure on travellers than presenting the option during the booking process and “forcing” them to decide. A medium way is the “opt-out” option, in which the offsetting fee is included, but customers can request not to pay it. One tour operator who declared that nearly all clients pay the compensation fee practices this option. It needs to be considered, though that the offsetting price is fixed for all its flights to Africa, and in comparison is calculated very low. It can be argued that the full emissions are not being compensated. To make a direct comparison, for a flight from London to Namibia one of the company’s main destinations, a fee of 20 pounds or about 24€ is added to the bill. For the same flight, the offsetting agency *atmosfair*, that takes the RFI into consideration and only invests in *Gold Standard* projects, calculates a cost of 142€³² to compensate for the generated GHG emissions. One company interviewed encourages their customers to voluntarily offset their flights through *atmosfair*, with only limited success so far, referring to the company’s own statements. The question therefore arises, if many travellers donating a small amount or a few people paying a large offsetting sum, is more preferable? In regard to completely “neutralising” the carbon emissions and also to effect rising awareness among travellers of their travels’ impact on the climate, the second option would be more suitable. However, as tourists are still barely prepared to alter their travel behaviour (cf. chapter 2.6), the argument can be brought forward that through the first option, potentially larger sums could be generated to finance offsetting projects.

It is worth mentioning that about 35% of one tour operator’s clients were willing to pay an extra donation over and above the offsetting fee that was included in the price. That means that even though the customers are informed that their flight emissions are already “compensated” for by paying the normal tour price, 35% still decide to voluntarily donate even more to a project. It can be reasoned that this reforestation project itself must be eligible and attractive for the travellers and also effectively communicated by the company. Even if it were a “normal voluntary offsetting” percentage and not “additional”, the number is quite high, although the different target groups have to be as considered as well when comparing different offsetting percentages. This example concerns a specific tour operator for environmental friendly travels and therefore caters for

³² Cf. www.atmosfair.de/en/act-now/contribute-now/offset-your-flight

different target groups than e.g. a mainstream tour operator. Still, it can be an indication for successful communication of the “why” and “how” of climate activities.

Disregarding the calculated price per ton of CO₂, already key differences in “measuring” the GHG emissions have been noticed. While some companies calculate every ton of CO₂ or CO₂ equivalents of either tour or flights, others donate a flat sum, as e.g. Andersch (2011) describes “*the greenhouse gas emissions are not calculated differently per trip, but every tour, independent of destination or length, is “compensated” all-in through the purchase of 100m² of rainforest*”³³. It can be critically discussed if donations to forestry projects without any calculated basis of saved CO₂ should still be regarded as “offsetting projects”, as the “compensated” emissions are very vague and its durability not secured. Some of the operators with own project do indeed inform their customers that the included donation does not cover all of the travel emissions.

It is difficult to compare the voluntary offsetting programmes, as several operators mentioned that there are so far not able to track the number of customers compensating their travel emission. This lack of data appears because the clients offset their emissions directly at the partner compensation agency and not through the tour operators. To be able to evaluate communication activities and observe trends e.g. it is necessary for tour operators to know these numbers. Looking at those tour operators that do survey their client’s offsetting behaviour, the correlation between the systematic approach and offsetting numbers is apparent: the easier the compensation is for the client, the higher the percentage of participating customers. This can be observed and compared, for instance, at TUI Deutschland: the flight booking systems already contains the option to directly compensate the emissions. In contrast, when booking a tour or holiday package online, a direct compensation is not yet provided, instead a link leads the travellers to an external offsetting website. To compare the results, while the integrated offsetting option is used by about 8% of the clients, only 1% of all people booking a tour follows the link and compensates its emissions. Also Intrepid Travel mentioned that the percentage of compensating travellers would be rather low. Intrepid, but also TUI is aware of this challenge and aiming to increase the numbers by improving the booking software and making it less complicated for travellers to offset their flights emissions.

In literature, this topic has been discussed by Becken and Hay (2009), whose research revealed similar findings to what this study’s interviews brought up. According to Becken and Hay (2009), clients’ willingness to pay depends directly on the access to the compensation option. If the compensation fee is already included in the price, the acceptance could reach 100%, while on a voluntary “opt-in” basis only 15% and on an “opt-out” basis 70% of travellers choose to offset

³³ Translated by author from the original quote: „Die Treibhausgasemissionen werden nicht pro Reise unterschiedlich berechnet, sondern jede Reise wird, unabhängig von der Destination oder Länge, durch den Kauf von 100m² Regenwald pauschal „kompensiert“ (Andersch, 2011).

(cited from Rumpelt, 2010). Moreover, a survey conducted by Mair (2011) confirmed these observations from the tourists' perception: apart from "doing the right thing", tourists also responded the "ease of purchasing and the low cost" as a reason why they chose to compensate (Mair, 2011:227).

Concerning the general acceptance of "climate friendlier tours", previous studies describe that customers seem to be hardly prepared to accept climate friendly products, except if they are explicitly requested (cf. Zotz, 2010). This topic was also brought up from one tour operator who developed a specific tour in which only climate friendly accommodation, transportation and activities are included. However, after a test period, the tour operator had to take this climate friendly tour off the market, due to a lack of demand. In this case, customers were not yet willing to accept such a product. As many factors influence the booking decision, there also might have been other aspects involved, independent of the climate ones. For an indebt analysis more details have to be available such as the price of the tour and target group.

4.4.2 Conclusions

The study has shown that tour operators can adopt a range of different activities to mitigate climate change. To answer the first research question, it can be summarised that the main motivations behind the tour operators' involvement in climate protection, is to take responsibility for GHG emissions resulted by their business activities. Moreover, the tour operators overall agree that climate commitment of travel companies will become more important in future. In general it can be assumed that these motivations are based on a combination of environmental responsibility integrated into their philosophy, willingness to fulfil customers' expectations and strategic business considerations, with each company owning different focal points. Concerning the climate mitigation measures, carbon-offsetting seem to be the main activity of the companies and not, as recommended by tourism experts (cf. section 4.2) the last step after avoiding and reducing GHG emissions. This can be concluded, because hardly any company has a carbon management plan as yet, and measures of reducing emissions were mostly limited to recycling at the office, small group travel and "trying to use" climate friendlier accommodation. It was identified that tour operators have determined opinions on whether or not they are managing an individual offsetting-project or cooperating with an agency. The reasons for preferring either compensating type are basically the same within each group of operators practicing offsetting the same way. The choice seems to be founded in each company's capacity and resources, but also the companies' general philosophy. Looking at the stated advantages for self-organised projects, such as "knowing that the money arrives" and "following up on the development", it can be concluded that not all operators trust in compensation agencies and their projects. Forestry projects are clearly preferred as self-managed offsetting projects while the other operators only receive a limited choice of energy projects from

their cooperating offsetting agency. It was identified that tour operators' pivotal factors for forestry projects were accessibility for travel groups, tangibility for communication purposes and social benefits for local communities. The impression given was that quality and durability of carbon savings and storage was, in contrast, only rated secondary.

Regarding the customers' feedback, tour operators with self-organised projects received slightly more positive feedback. No differentiations were found concerning the general effects: companies from both offsetting groups indicated growing customer satisfaction or believed their climate commitment would positively influence their bookings. At the same time, several companies stated not having noticed any change, or had received any feedback, independently their type of offsetting activities. A positive correlation was observed between augmented communication of climate activities and feedback. It can therefore be concluded that the type of compensation is not crucial for customers' feedback and satisfaction, rather it is the way it is communicated to the travellers. Furthermore, it cannot be asserted that a certain kind of offset project received more voluntary payment than others. Again, it became rather apparent that communication plays a central role and, in particular, the question how carbon compensation was offered to the clients. The highest offsetting payments were, obviously, achieved by including the offset fee into the tour price and making it therefore compulsory. On the other hand, it was found out that also the "more voluntary" opt-out option was well received and received very high payments, while the percentage of all other voluntary offsetting possibilities was either unknown or stated as very low. It can be said that, the easier it is for the customers to voluntarily compensate, the higher their willingness to pay. Even though some tour operators mentioned the price sensitivity of the customers, the feared decrease in bookings did not seem to have eventuated to the operators that included the fee; in contrast, the opposite was observed. In particular, these tour operators are economically successful, which demonstrates exemplarily that business success and climate protection can be achieved hand in hand. The challenges mentioned concerned mostly the complexity of carbon offsetting and the low participation rate when offsetting was offered as "opt-in" or on a different website. It can be suggested that the operators address these topics by enhancing the communication and integrating software solution for making it easier for customers to offset. Further stated difficulties to find "climate friendly" partners and suppliers for their tours could be tackled by augmenting the "climate consultations" that some tour operators already offer their partner companies.

Improvements regarding these factors can be expected, as all operators plan to continue, to progress or even to expand their climate activities within the next years. One reason is the likelihood and their expectation of travellers' growing climate awareness and it can be concluded that these companies try to keep and improve their competitive advantages. The study revealed that it is not the size of a company, but its general commitment to sustainability, a strategic carbon management

plan, transparent and comprehensive communication that can be regarded as factors for success. Furthermore, integrating the compensation fee can be considered as successful method as well as visiting the offsetting projects. Nevertheless, the success also depends on the operators' specific target groups; for instance if catering to climate-conscious demand segments the acceptance to pay a compensation fee is generally higher than in the budget tourism segment. Summing up, not one company mentioned having lost clients due to its climate activities, but several tour operators stated that sales have increased. Regardless of the necessary carbon emission savings for the climate, it can be concluded that the advantages for tour operators of adopting measures to mitigate climate change outweigh potential disadvantages and additionally improve the companies' preparedness for climate risks.

Finally, it needs to be kept in mind that the interviewed companies merely serve as examples and they cannot be counted as a representative sample of all tour operators active in climate protection. Therefore, the conclusions drawn from this study should only be regarded as indications and not as general applicable outcomes.

5. Case Study: Tour Operators and Carbon Offsetting in Namibia

5.1 Introduction

Although African countries contribute only insignificantly to Global Warming in comparison to industrialized or emerging countries (cf. IPCC, 2007; Reid 2007; Angula, 2008; Ehmer & Heymann, 2008), Namibia belongs to the regions to be most likely heavily impacted by the effects of climate change, which pose a serious threat on the country's progress in achieving its development goals (cf. Angula, 2008; Mfuno et al., 2009).

Tourism in Namibia plays a significant and growing role in the economic development of the country³⁴, 15 % of GDP is attributable to this sector (TNN, 2009). With nature-based tourism activities being Namibia's main tourism capital, the sector is highly dependent on its natural resources and therefore potentially vulnerable to physical impacts of climate change, such as droughts, floods and loss of biodiversity (Reid, 2007; MET, 2010). At the same time, tourism in Namibia itself has high GHG emissions mostly due to the high mileage per round trip within the large country and the use of diesel generators at countryside lodges (Strasdas, 2011). In regard to indirect impacts, a decrease in access to developed source markets as a result of climate change could severely affect Namibia's development (Davidson, 2009). Sky-rising air fare prices and a "bad environmental consciousness" of travellers might in the future have even more repercussions on long-haul destinations like Namibia, whose tourism industry is particularly vulnerable in this respect because of its dependence on tourists from long-haul source markets, most notably Germany, the UK and the USA. As discussed in the previous chapters, holiday makers are becoming more and more aware of environmental concerns and about 20% of German and UK travellers are looking at sustainable aspects when making their holiday decisions (ABTA, 2011; Poser, 2011). According to Davidson (2009), the tourism sector stands at a "turning point" and might even decline by losing its market share instead of as forecasted increasing, if the industry continues with "business as usual". Davidson notes, however, that Namibia as a tourism destination possesses large potential if "there is a concerted and collaborative effort to embrace change and take advantage of the opportunities presented by climate change" (Davidson, 2009:1).

A reason why specifically Namibia was chosen for this case study is the country's particular approach to the development of sustainable tourism. In the country's official vision for tourism development, the government states that Namibia's tourism strives to become a "mature, sustainable and responsible tourism industry" and its guiding principles further define that "sustainability is inextricably linked to the protection of the natural resource base namely,

³⁴ Compare among others Ashley, 2000; Palm, 2000; Page & Connell, 2006 ; Jones et al., 2009; MET, 2010.

environment, aesthetic value, wildlife and culture“ (MET, 2011:1). Since independence, Namibia has been successfully engaged in combining tourism activities with nature and wildlife conservation as well as rural development and empowerment. Despite the social and environmental focus of Namibia’s tourism industry, climate change has not surprisingly seemed to “be on the agenda” until now. All these observations bring Namibia into effect as very interesting destination for the case study.

5.2 Key questions and hypotheses

The previous chapter highlighted and discussed opportunities for tour operators to mitigate climate change. Namibian tour operators do not seem to already be involved in carbon offsetting projects or alternative mitigation measures as an initial internet research revealed (see also Strasdas, 2011). By taking these findings and the results from chapter 4 into consideration, the following hypotheses were developed for the case study:

1. Even though Namibia’s tourism depends on natural resources, precisely resources that might suffer from Global Warming, climate protection is not a high priority for the tourism industry in Namibia at the moment.
2. Namibian Tour operators are not fully aware of and familiar with climate change and its likely impacts including mitigation opportunities.
3. Concluding the last chapter’s experiences of international “front-running” tour operators, it is hypothetical that interest in potential carbon offsetting projects could be increased in Namibia if the projects:
 - take place in Namibia
 - are also generating community benefits in addition to saving emissions,
 - are tangible and transparent
 - can be used for marketing activities.

As key questions arising from the hypotheses were identified:

- a. Are tour operators generally aware of climate change? And is a changing climate directly or indirectly perceived as a threat for Namibia’s tourism industry?
- b. How do tour operators estimate the awareness of their clients? And do they expect the adoption of climate protection measures to become an advantage in the tourism market?
- c. Are there any measures adopted within the industry already to mitigate carbon emissions? Or are any planned? Is general interest present?

History and political situation then and now

European explorers and settlers arrived first in small numbers in the 16th and 17th centuries, before larger groups followed during the 19th century, many of whom were traders, travellers, hunters or missionaries of German origin (Republic of Namibia, 2004). In 1884, Namibia was declared a German protectorate by the German chancellor Bismarck. The outbreak of World War I terminated the colonisation by Germany in 1917 (NTB, 2011). In 1920 South Africa was granted the mandate of Namibia by the League of Nations and had the complete authority of administration and legislation in the country. After the liberation movement has fought for over 20 years against South Africa, in 1989, international pressure urged South Africa to acknowledge the UN resolution that demanded fair and free elections under the supervision of the UN (Republic of Namibia, 2004). The occupation that had led into a state of civil war came to an end on March 21st 1990 with the independence of the Republic of Namibia (Jones et al., 2009). Namibia has a democratic constitution and a division of power between the executive, legislature and judiciary (Schalkwyk, 2011).

Population

Namibia is a very sparsely populated country with about 2,2 million inhabitants, (UNDESA, 2009; MET, 2010). About 38% of the population lives in urban areas (CIA, 2011). While the capital city Windhoek is located near the centre of the country, the majority of people reside in central-northern parts of the country (MET, 2010; NTB, 2011). Of the 13 ethnic groups in Namibia, the Ovambo tribe represents the largest group with about 50% of the total population (CIA, 2011). Further major population groups are the Damara, Nama and Herero (NTB, 2011). Within the Namibian society, about 6% of the population is white (CIA, 2011), mostly descending from German, English or Boer settlers. Despite its small number, this ethnic group still has significant influence on the cultural life as well as the economy of Namibia and particularly dominates the tourism industry (Halbach, 2000).

With a Human Developing Index (HDI) of 0.606 in 2010, Namibia is ranking 105th in the world (UNDP, 2010). This is due to its very high multidimensional inequality. Namibia's income disparities, for instance, are the highest worldwide with a Gini coefficient of 0.743 (UNDP, 2010). Different ethnic groups have extremely dissimilar HDI scores: while German-speaking citizens have a higher HDI than Norwegians, the indicators of San-speaking Namibians are corresponding to those in Sierra Leone (Levine, 2007 cited from Jones et al., 2009).

Economy

From the time of becoming independent from South Africa in 1990, the Republic of Namibia's economy has undergone an average growth of 4.2% and has been one of the fastest growing and largely competitive economies in Sub-Saharan Africa (WTTC, 2006; Jones et al., 2009; NPC,

2010). Namibia's main economic sectors are mining (contributed to 15.8% of Namibia's gross domestic product (GDP) in 2008), agriculture (5.5%) and the tourism industry³⁵, which contributed 15% to the GDP (TNN, 2009; Schalkwyk, 2011:16 et seq.). The economy is still lacking diversity and its development and growth is heavily dependent on extraction and export of minerals, in particular diamonds and uranium. The economy is further dependent on the import of consumer goods and Namibia trades in about 70% of its food requirements (Angula, 2008). The most rural households, up to 45% of Namibia's population, use farming for their livelihood, but agriculture is the primary occupation for few people (TNN, 2009).

Namibia's Development Challenges

Namibia faces a significant number of developmental challenges: economically as well as socially and environmentally (Republic of Namibia, 2004). The UNDP's Human Development Report states that of Namibia's total population, 55.8% can be classified as living below the poverty line (UNDP, 2010). Major developmental challenges confronting Namibia include, for instance, alimentation problems, limited water resources; health (e.g. HIV/AIDS), limited human resources and gender inequality. But also "unsustainable natural resource management and loss of wildlife and biodiversity" belong to the challenges (MET-UNDP-NNF, 2002, cited from Mfuné et al., 2009:23). Notwithstanding the demanding difficulties that are delaying development, Namibia belongs to the few countries in Africa that are named to be advancing in reaching the Millennium Development Goals (MDG). The recently commissioned Rapid Trade and Environmental Assessment (RTEA) highlights the progress that Namibia has achieved, especially in the health and educational sector as well as in environmental sustainability (Jones et al., 2009).

5.4 Climate Change in Namibia

"Sometimes it's dry for a long time and then all of a sudden there is too much rain. We have been living here for forty years, but only in the past three years has our house been inundated and our fields destroyed."

Aini Paavo, Namibian Farmer (cited from Bosch, 2011b:17)

Namibia's climate variability, in combination with a current deficiency of reliable data, makes it difficult to distinguish and forecast climate trends (MET, 2010). In fact, Mfuné et al. (2009) declares that a prediction and quantification of future impacts by climate change is impossible with a high level of accuracy or confidence. Nevertheless, most global circulation models predict increased occurrences and intensities of extremely dry periods and indicate that high-rainfall events and floods are likely to augment (cf. Reid, 2007; Angula, 2008; Mfuné et al., 2009; MET, 2010;

³⁵ An indebt introduction to Namibia's tourism sector will be separately provided in chapter 5.5.

WWF, 2011). An increase in numbers of hot days and a concurrent decrease in very cold days has been observed in Southern Africa between 1961 and 2000, as stated in the IPCC assessment report of 2007 (cited from MET, 2010:42). In recent years, devastating impacts of extreme heat waves, draughts but also inundations have been experienced in Namibia (Angula, 2008; Jones et al., 2009).

Namibia belongs to a sub-region that has been recognized by the IPCC as being most vulnerable to expected climate change (IPCC, 2007; EMA, n.d.), in particular because Namibia is largely dependent on its natural resources. It is anticipated that climate change impacts will severely affect Namibia's economy (Mfune et al., 2008; Jones et al., 2009). In this context, Angula (2008) also sheds light on the difficulties developing countries are already facing in tackling socio-economic issues that are likely to become aggravated by the impacts of climate change. By taking into account that Namibia's population is assumed to grow 66% by 2031 raising the pressure on natural resources, the challenges to cope with climate change become even more obvious (cf. Mfune et al., 2008).

Numerous negative impacts of climate change are predicted for Namibia. It is likely that rising temperatures and less rainfall in Namibia will lead to severe water scarcity, a further restriction of the remaining agriculture (e.g. livestock and crop losses) and to aggravate poverty in rural areas (cf. Mfune et al., 2009). Moreover, floods can affect infrastructure, a spread of malaria is feared in previously drier regions and also biodiversity and complete ecosystems will be impacted (Jones et al., 2009).

To facilitate mitigation and adaptation and minimize impacts on Namibia's socio-economic development, Mfune et al. 2009 emphasize that a national climate change strategy is necessary. Within this strategy, Namibia should also research the possibilities of benefiting from carbon trading through the Clean Development Mechanism³⁶ (CDM) or the voluntary carbon markets (Jones et al., 2009). In 2009, the development of a road map for a national climate change policy were under way (Mfune et al., 2009) and the coordination of climate change activities of the Namibian government has been carried out for a decade by the National Climate Change Committee (NCCC). The African Adaptation Project (AAP) team that aims to help Namibia "to adapt to the negative effects of climate change" consults with this governmental body (Bosch, 2011a:11). Moreover, newly established offices of the Designated National Authority (DNA), as well as a CDM office have taken up work with the support of the NCCC (Oertzen, 2009). Jones et al. (2009) discern that Namibia admittedly has progressed in relation to involving itself in CDM-activities, however, to fully take advantage of the country's potential of CDM, additional support is required for institutional and project development.

³⁶ Namibia is a non-Annex I party to the United Nations Framework Convention on Climate Change and therefore qualifies to host GHG mitigation projects to earn Certified Emission Reductions (CERs) (Oertzen, 2009).

Global GHG inventories showed that Namibia has only a small contribution to global GHG emissions and, not being an annex 1 country, does not have to reduce its GHG emissions. Nevertheless, Namibia could benefit from CDM funds for renewable energy projects and at the same time reduce its mostly fossil-fuel generated electricity imports from South Africa (Mfuno et al., 2009). Jones et al. (2009) recommend Namibia to explore the possibilities of solar power and small-scale biomass for carbon trading projects to generate necessary financing for adaptation and mitigation measures.

5.5 Tourism in Namibia

Namibia's vision of tourism:

“A mature, sustainable and responsible tourism industry contributing significantly to the economic development of Namibia and the quality of life of all her people, primarily through job creation and economic growth.”

(Directorate of Tourism - Ministry of Environment and Tourism (MET), 2011:1)

5.5.1 Overview of Namibia's Tourism

Tourism has developed very fast since Namibia's independence and is still a rapidly growing and now well established industry sector playing a vital role in the country's economy (Ashley, 2000; Page & Connell, 2006; Jones et al., 2009; MET, 2010). Tourism is regarded as a key sector in achieving the national development goals (MET, 2008) by contributing towards poverty alleviation and having “more potential as a sustainable economic sector as virtually any other form of economical development in Namibia” with its products being repeatedly sold without depletion (Republic of Namibia, 2004:29). Namibia's government fosters the development of sustainable tourism (cf. Page & Connell, 2006) and in particular nature-based tourism forms are regarded as “ideal opportunities for economic growth” (Republic of Namibia, 2004:44). In the national tourism policy it is claimed that:

“Tourism development must be economically, socially and environmentally sustainable. Namibia neither wants, nor can afford to permit, tourism that yields only short-term benefits and leaves behind a wake of destruction, de-motivation or disruption to the fabric of local life.” (MET, 2008:3)

Economically, tourism contributed directly N\$3.1 billion (280 million Euros³⁷) or 3.8% to Namibia's GDP in 2008³⁸. Combining the direct and indirect impacts, tourism can be accounted for 14% of the GDP (NTB, 2010). For 2020, the Namibia Tourism Board estimates that the travel and tourism industry's direct and indirect impacts will contribute to 18% of the GDP and 26% of the national employment (NTB, 2010:20). In total, about 81 000 jobs depend directly or indirectly on the tourism industry, equalling to 17% of Namibia's total employment in 2010 (TNN, 2011; Schalkwyk, 2011). Hospitality jobs are widespread throughout the country and often offer prospects for socio-economic development in regions, where hardly any other job opportunities are present (MET, 2008).

5.5.2 Namibia's International Tourists

In 2010, the number of international tourist arriving in Namibia stood at 984 099, presenting a total increase of 30% from 2002 to 2010, as can be seen in figure 9 (TNN, 2011; NTB, 2011b). Tourist arrivals are predicted to increase by 5.1% the following years, reaching 1.7 million by 2021 (TNN, 2011).

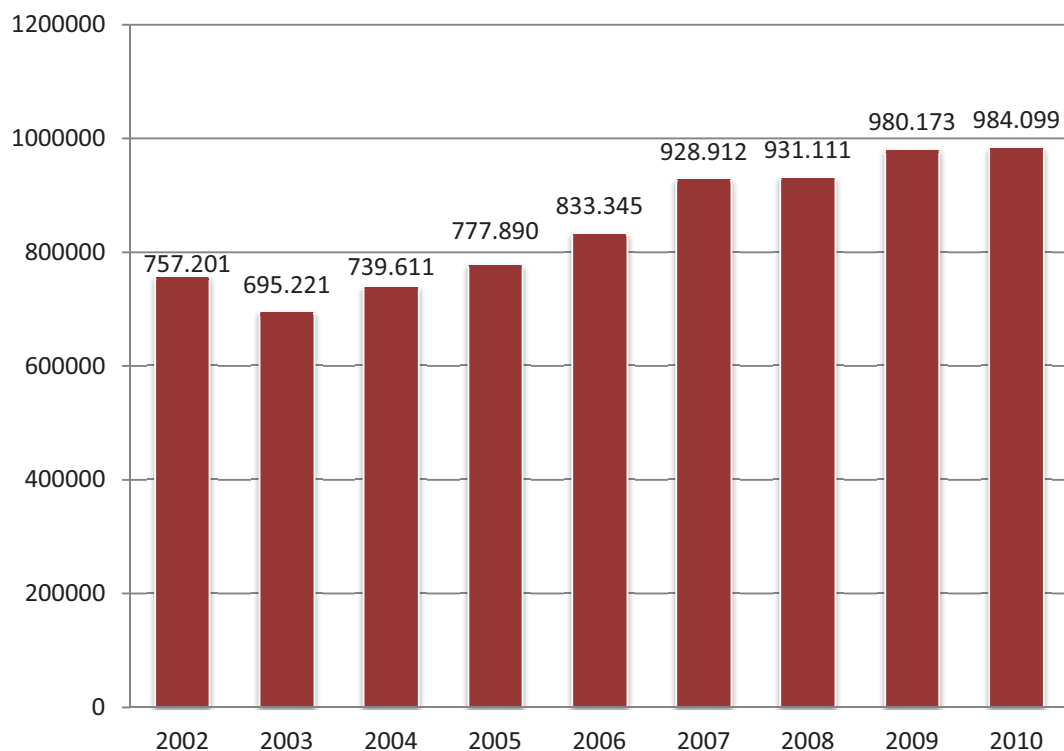


Figure 9 - Total Number of Tourist Arrivals 2002 to 2010.

Source: graph based on data from MET, 2009; NTB, 2010 and NTB, 2011b.

³⁷ effective 29.09.2011, converted with: www.xe.com/ucc

³⁸ At the time of this research, the tourism statistics of 2008 were the newest available.

Newest statistics point to the high importance of European visitors for Namibia's tourism industry. While total tourist arrivals only went up by 0.4% in 2010, compared to the previous year, visitors from Europe increased at the same time by 6.1%. The highest growth rates from the European source markets are seen from Scandinavia with an increase of 24% in 2010 compared to 2009, Belgium (22%) and Switzerland with 13% more arrivals (NTB, 2011b). The statistics further reveal that the average length of stay among all tourists augmented from 17 days in 2009 up to 19 days in 2010 (NTB, 2011b).

International visitors enter the country for a range of different reasons. For 48% of all tourists in 2008, holiday and leisure were the main purpose of their visits for nearly all key markets, with the exception of Angolans, who mainly visited friends and relatives and Chinese travellers who mostly came for business purposes. In general, holidaymakers are followed in numbers by tourists arriving with the purpose of visiting friends and relatives³⁹ (VFR) with 37% and business travellers accounting for 13% of all arrivals (MET, 2009; Schalkwyk, 2011:8).

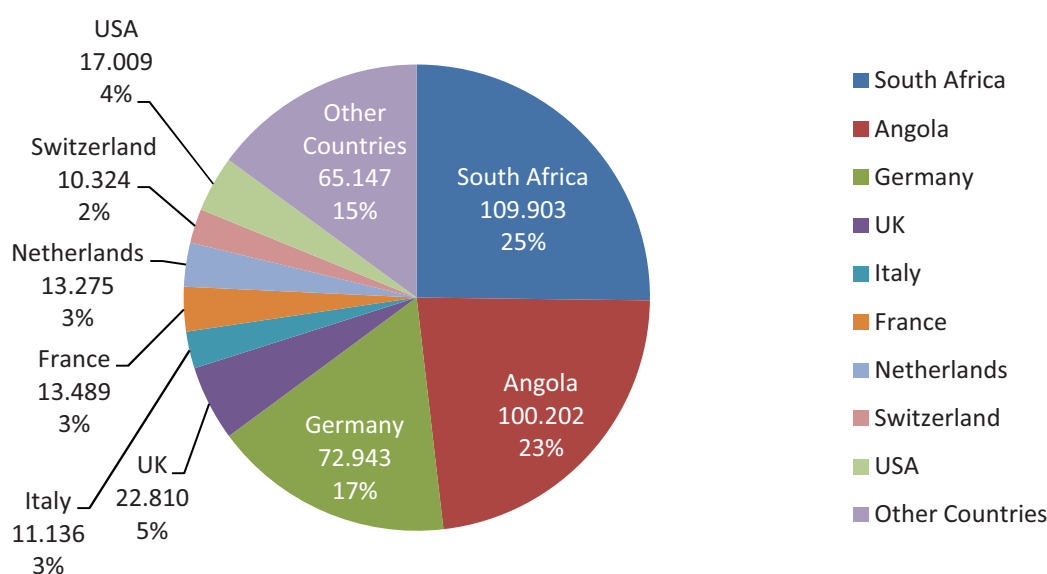


Figure 10 - Tourist arrivals (2008) for the purpose of holiday in percent by nationality.

Source: chart based on Tourist Arrival Tables 2008 (MET, 2009)

Figure 10 displays that tourists, arriving with the purpose of holiday, are mostly coming from South Africa (25%), Angola (23%) and Germany (17%). The chart only shows the major tourism countries, and all nationalities accounting for less than 2% of the total arrivals are collectively represented under "Other Countries". The majority of tour operators and lodges in Namibia quotes Europe and especially Germany as their source markets⁴⁰, as African visitors mostly would have

³⁹ By definition, the category "visiting friends and relatives" (VFR) includes for example "activities such as visiting relatives or friends; attending weddings, funerals or any other family event; short-term caring for the sick or old, etc." (UN & UNWTO, 2010:25). There is only one main purpose per tourism trip, but visitors can undertake additional activities on the same trip.

⁴⁰ This became apparent during almost all interviews with Namibian tour operators. Only one tour operator stated that his source markets include visitors from African countries (50%).

different holiday preferences and spending patterns. A reason why Namibia's domestic tourism market can be regarded as insignificant for the tourism industry, can be found in the fact that the country's population is not numerous and the poverty rate high (Strasdas, 2011).

5.5.3 Tourism Resources

Namibia is often described as being one of the most geographically and culturally diverse countries in Africa possessing "world-class tourism resources" (cf. WTTC, 2006; Davidson, 2009). The World Travel & Tourism Council (WTTC) further praises the country having "the potential to become one of Africa's leading travel and tourism economies" (WTTC, 2006:5).

Namibia provides a generally good infrastructure for tourism in terms of primary supply such as transport, water and energy, waste disposal and medical care. Specific tourism infrastructure including accommodation, restaurants and further establishments, mainly used by tourists, are likewise in place (Palm, 2000). Most of the facilities are enterprises of small or medium size (WTTC, 2006) including many accommodation facilities at guest farms (Page & Connell, 2006). The government under its Wildlife Resort initiative controls about a third of the accommodation establishments located in the National Parks. These establishments focus, as postulated for all tourism stakeholders in Namibia's tourism policy (Jones et al., 2009) on low-volume and "high-end" rather than on mass tourism (cf. Palm, 2000; Page & Connell, 2006). Having a look at recent tourism developments, the number of registered tour and safari operators has grown exponentially from 28 in 2004 to 600 in 2011. In the same time span, the total number of accommodation establishments increased more than fivefold from 407 to 2150 (TNN, 2010:26).

A particular and very successful branch of tourism is Namibia's Communal Conservancy Tourism Sector (NACSO), which has been selected as a finalist for the Tourism for Tomorrow Award in 2010 for "achieving conservation and community benefits at a scale never before seen in Africa" (WTTC, 2011:1).

Communal Conservancy Tourism in Namibia

In the last two decades more and more communities of communal areas became involved in the tourism sector. Encouraged and supported by NGOs and government, this type of tourism is now internationally renowned for its exceptional quality (MET, 2008; Ashley, 2000). According to Sproule and Denker (2010), tourism in Namibia plays an important role as a partner in the development of rural areas and conservation projects. Around 230.000 people live in areas managed by the currently 59 communal conservancies⁴¹, totalling one fourth of Namibia's rural

⁴¹ A further 25 conservancies are currently developed (Sproule & Denker, 2010).

residents (Jones et al., 2009). Conservancies strive to reinstate the area's natural biodiversity and "share resources amongst all members of the conservancy" (Schalkwyk, 2011:71).

In communal conservancies, all tourism enterprises are managed by a conservancy committee, whereas the communities are actively involved in daily operations. Since 1994 Community Based Tourism (CBT), as a non-exclusive form of community tourism⁴², is increasingly used in Namibia to foster rural development and nature protection alike (cf. Palm, 2000; Ashley, 2009). Currently about 29 formal joint-ventures (JV) projects between private sector tourism companies and conservancies generate 789 full-time employments and further 250 seasonal jobs (Sproule & Denker, 2010). The profits generated by tourism are utilised for community development, as the government permits its local communities the rights to keep 100% of the income (WTTC, 2006). Community tourism in Namibia therefore helps to counteract the immense disparities in the country since it is "not only the generation of economic benefits which is important but also the dispersion of those benefits to a wider group in society" (Republic of Namibia, 1994, cited from Palm, 2000:17).

5.5.4 Demand Side

Namibia's nature is without doubt its main tourism attraction and estimations show that nature-based tourism makes up more than 75% of the total tourism activities (Reid, 2007:19; TNN, 2009:53). As can be seen in figure 11, the greatest share of visitors in Namibia is attracted by landscapes and wildlife viewing (MET, 2010). Cultural tourism products, however, increase in popularity among tourists (Davidson, 2009; Jones et al., 2009). The graph (figure 11) also shows the importance of Namibia's climate as a deciding factor for tourists, being the third most important attraction factor after landscape and wildlife viewing.

⁴² Ashley (2000) declares that community tourism "embraces all forms of local involvement in tourism" and has a strong focus on "community-based tourism which involves some collective action and a community institutional base for managing tourism." (Ashley, 2000:9)

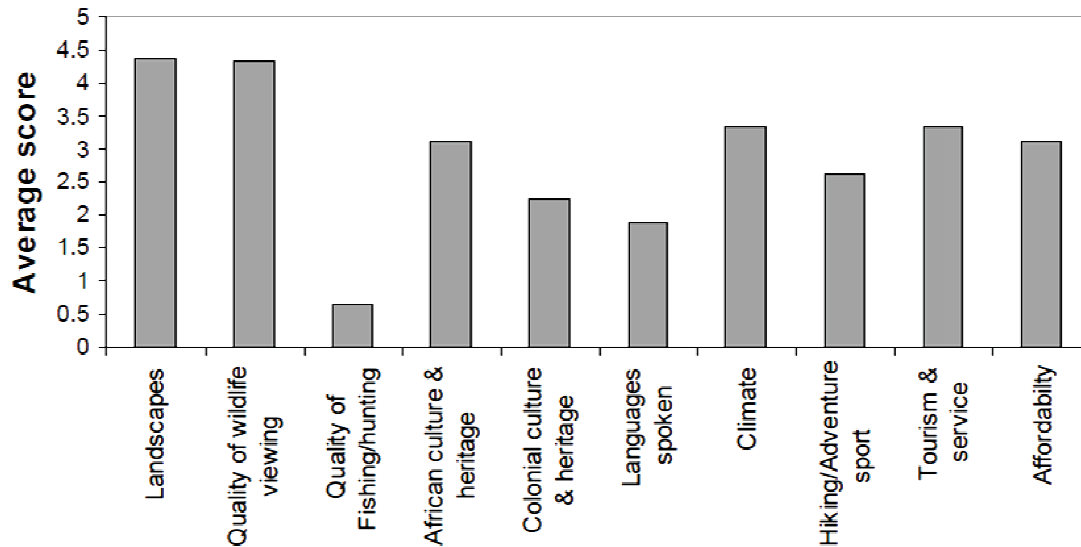


Figure 11 - The visitors' average rating of each of the attraction factors. The rating scale used: 0 = Not an attraction to 5= A critical deciding factor (Source: MET, 2010:110)

The Data of the graph is based on a survey among holidaymakers in 2009, containing 472 completed questionnaires (MET, 2010). The most popular forms of travelling in Namibia are sightseeing round trips and safari tours, either as a group holiday or independent self-drive tour (Palm, 2000).

5.5.5 Potential Impacts on Tourism Caused by Climate Change

Due to the fact that Namibia's tourism is highly dependent on natural resources, it is expected that any impact on the natural resources from climate change will eventually also affect the tourism sector (cf. Reid, 2007; Davidson, 2009). Many of the potential impacts described in chapter 2.2.2 of this thesis are equally applicable to Namibia; nevertheless there are some more specific phenomena to point out. For instance, a decrease in wildlife numbers can have a direct impact on the quality of wildlife viewing, resulting in a declining demand for wildlife tourism and nature-based tourism in general by 15% (MET, 2010). However, it is also pointed out that expanding other types of tourism ventures which are less vulnerable to climate change like cultural or adventure tourism, might compensate the drop (MET, 2010).

As climate plays an important role in tourists' decision making (fig.11), it can be assumed that rising temperature on the one hand, and an increase in extreme weather events and precipitation on the other hand, will influence Namibia's tourism demand. Consequently, also the future development of the country depends indirectly on the climate (cf. Reid, 2007). Having a look at long-term impacts, important tourism towns at the coast like Swakopmund and Walvis Bay could be threatened by sea level rise resulting in land losses and damages to, for example, infrastructure, property and tourism potential in general (MET, 2010).

In the framework of the RTEA⁴³, Davidson (2009) sheds light on the potential impacts that might be caused by the increasing awareness of climate change amongst tourists from Namibia's main source markets. He points out that mainly tourists' concerns over global warming in relation to their flights are likely to affect the tourism industry. Davidson concludes that, if the country's tourism sector chooses to carry on with "business as usual", "there is a real possibility that Namibia will lose its market share and the sector will decline" (Davidson, 2009:xii). Nevertheless, as in other sectors and countries, there is still high uncertainty concerning the impacts of climate change and research in this field (cf. Reid, 2000; MET, 2010).

5.5.6 Tourism Stakeholders at a Glance

To better understand the functions and objectives of different tourism stakeholders, a short introduction is provided to private sector, governmental and non-governmental tourism organisations and associations that play a vital role in Namibia's tourism development. The selection is based on associations that have been described as key players in the interviews with either the tour operators themselves or further members of the industry. The aim was to identify important stakeholder influencing Namibia's tourism industry and the list is by no means claimed to be complete. In addition to pure tourism organisation, two active conservation NGOs, the Namibia Nature Foundation (NNF) and WWF Namibia, are being introduced as they act as mediators between tourism and nature conservation⁴⁴.

MET – Ministry of Environment and Tourism, Directorate of Tourism (DoT)

This authority is responsible for the planning and coordination of Namibia's tourism development (MET, 2008). The directorate's key functions are to "to formulate the tourism policy, legal and regulatory framework" and to "facilitate the implementation of tourism policies, legal and regulatory framework" (MET, 2011).

The Ministry of Environment and Tourism further describes its role as comprising to "support the development of a robust tourism sector that includes private sector and community partners, and where appropriate, manage the tourism and natural resources assets under its control so that collectively this will increase the sector's contribution to GDP through poverty reduction and increased income distribution especially in rural areas." (MET, 2010:30) Within the DoT, an own subdivision is dedicated community-based tourism (MET, 2011)

⁴³ Rapid trade and environmental assessment, conducted for the Republic of Namibia in 2009.

⁴⁴ Because of the limited scope of this thesis, interrelations and existing cooperation projects between the stakeholders are not part of the study.

NTB – Namibia Tourism Board

A governmental agency for tourism, established in 2001 and working under the MET in the fields of research, product development, promotion and quality and service standards (MET, 2008) The NTB's main tasks are to promote Namibia internationally as a tourism destination, ensure that services and facilities are fulfilling international standards but also to endorse and encourage environmentally sustainable development in tourism (NTB, 2011a). In its mission, the NTB also states to be dedicated to developing and maintaining the country's natural resources and its commitment to long-term conservation (TNN, 2010) Providing guidance and advice to tourism stakeholder in the private sector as well as to the MET are further functions of the statutory body (NTB, 2011a). The NTB receives funding from the MET and also finances itself through various fees e.g. for registration and grading of operators and through donations (NTB, 2011).

TASA – Tour and Safari Association of Namibia

TASA was founded in 1989 as a private sector body and represents tour operators and safari companies in Namibia. Additional members are also travel agents, car rental companies and accommodation providers. TASA “acts on behalf of its members to encourage the development of responsible tourism in Namibia, ensure standards and reliability in the Namibian tourism industry and further the common interests of Namibian Tour Operators” (TASA, 2011:1).

HAN – Hospitality Association of Namibia

HAN is the lobby of accommodation providers and further hospitality companies. The association was founded in 1987 to protect and promotes its member's interests and it aims to maintain and improve the quality services and general standards of the accommodation industry (NTB, 2010). One of its promises is the “promotion of Environmentally Sustainable Practices” (HAN, 2011:1).

FENATA – Federation of Namibian Tourism Associations

Since 1992, this umbrella organisation supports tourism associations and private institutions in tourism (NTB, 2011a). FENATA's function is to speak for the tourism industry and facilitate communication between the government and the private sector. Members belonging to the non-profit federation are e.g. TASA and HAN, as well as the national airline Air Namibia. FENATA's mission is to “be the voice of the private sector of the tourism industry in Namibia in support of environmental sustainability, growth and development of our tourism products for national economic stability and increased business opportunities” (FENATA, 2011:1).

Eco-Awards Namibia

This initiative was launched in 2004 with the objective to endorse sustainable tourism practices and offer a mark of distinction for eco-friendly accommodation providers. Any establishment that has

been awarded by the programme with a “desert flower certificate” shows that it “keeps to a standard of environmental care and implements sustainable practices for the future of the immediate environment, the company and the people” (Eco Awards Namibia, 2011). Up until now, about 20 companies have received the eco awards Namibia, with further establishments in the process of certification.

NNF – Namibia Nature Foundation

A not-for-profit NGO, established in 1987 as a “charitable and funding institution of a public character, with an independent board of trustees” (NNF, 2011). Namibia’s leading environmental NGO’s (Schalkwyk, 2011) main objectives are to “promote sustainable development, the conservation of biological diversity and natural ecosystems and the wise and ethical use of natural resources for the benefit of all Namibians, both present and future” (NNF, 2011). Amongst many fields of activity, the NNF is also involved in planning and implementing of tourism development plans at regional and communal level.

WWF Namibia – World Wide Fund for Nature

A NGO that supports and facilitates, amongst others causes, the development of community-based tourism projects in many conservancies for which tourism has become the most significant source of income. WWF Namibia’s vision is to “partner with local communities to empower them to manage their natural resources and ensure a future that includes healthy wildlife populations and sustainable economic growth” (WWF, 2011).

5.6 Empirical research

This chapter is dedicated to the empirical research undertaken in Windhoek, Namibia in July and August 2011. A presentation of each interviewed tour operator would go beyond the scope of this case study, but a brief introduction pointing out some information about the companies can be found in the appendix.

5.6.1 Overview of Tour Operators Interviewed

The tour operators interviewed are of different sizes, varying from very small to large. They offer group tours, self-drives or private tours in price categories from “budget” to “luxury” and therefore address a range of target groups. The objective of the case study was to interview a somewhat representative selection of Namibia’s tour operators. In addition to the 15 companies that mainly act as tour operators, there is one accommodation provider that operates several upscale lodges which was included into the selection. The inclusion of this business example aims to add a

different perception and to detect potential discrepancies between operators of tours and accommodations in regard to attitudes and needs of climate protection measures. It needs to be known, however, that in Namibia many tour operators also own accommodation facilities, maintain their own vehicle fleet or even an air charter.

The following list shows the companies in alphabetical order and it names the interviewees as well as their position within the business.

Table 7 - List of Interview Partners and Companies

Name of the company	Size ⁴⁵	Main market(s) ⁴⁶	source	Main products, specialities ⁴⁷
&Beyond				
Vernon Swanepoel (Manager Namibia Ground Handling)	S/L*	(unknown)		Tailor-made small group, upscale safaris
ATC Namibia				
Monika Ihms (Director)	L	80% Germany		Group travel and self-drive tours
Camelthorn Tours & Transfers				
Dina Uanguta (Founder and director)	S	Europe		Transfers, township tours, tailor-made private tours
Cardboard Box Travel Shop				
Mike Whitelock (Managing Director)	M	50/50 Africa/Europe		Self drives, budget group travel, tailor-made tours
Chameleon Safaris				
Jackie Burton (Director)	S-M	Europe		Scheduled budget safaris & Backpacker accommodation ⁴⁸
Cheetah Tours & Safaris				
Helmut Schäfer (Managing Director)	M	95% German-speaking		Upscale, private luxury safaris
Gondwana Collection				
Manfred Goldbeck (Managing Director)	L	Europe		Accommodation facilities (mostly upscale lodges)
Kuene Conservancy Safaris				
Dr. Margaret Jacobsohn (Trustee of KCS's Board)	S-M	(unknown)		Community-based tourism, small group tours
Kuoni Private Safaris				
Martin Cook (Destination Manager)	S/L*	80% Europe		Tailor-made, private safaris
NatureFriend Safaris				
Leander Borg (Managing Director)	M	80% Europe		Tailor-made fly-in safaris and land tours

⁴⁵ The categorisation of the companies into classes of size, turned out to be quite challenging as some tour operators are small in Namibia but belong to larger companies or do not share their numbers of customers or turnover. The size categories are therefore solely estimations without actual data, based on self-reporting during the interviews and discussions with representatives from the NTB and Eco Awards Namibia.

⁴⁶ The source market data has been extracted from the interviews with the tour operators.

⁴⁷ This category is based on interview outcome and website research. It is not intended to be a complete list of products or services offered by a company, rather than an outline of the main characteristics of their products.

⁴⁸ Chameleon Safari's sister company „Chameleon Holidays” also offers tailor-made safaris from budget to high-end.

Pack Safaris Silvia Steinbrück (Transportation)	M	90% Germany	Group travel and self-drive tours
Sense of Africa Paul Brinkmann (Managing Director)	L	95% EU (60% Germany)	Group travel and self-drive tours
Springbok Atlas Martin Wiemers (Executive Director)	L	Germany & Europe	Group travel and self-drive tours
Tok Tokkie Trails Barbara Wayrauch (Business operations)	M	Germany & Europe	Small group trekking tours
Ultimate Safaris Martin Webb-Bowen (Managing Director)	S-M	English-speaking (mostly UK/US)	Tailor-made safaris, small groups
Wilderness Safaris Jack Chakanga (Environmental Officer)	L	Europe & US	Upscale safaris, lodges and air charter

Explanation: S= small, M= medium, L= large; S/L* = small branch/destination management office in Namibia, belonging to a large, international company.

5.6.2 Research outcomes

The results presented in this chapter provide a snapshot of tour operators' opinions and thoughts on climate change and attitudes towards carbon-offsetting. The interview guideline that was used can be found in the appendix.

General Climate Change Awareness and Perception

In the query, the companies were asked about their estimation of potential impacts on the tourism industry, in order to obtain an idea of Namibian tour operators' awareness of climate change. The results in figure 12 show that the majority (75%) of the tour operators consider climate change as a threat for tourism either in terms of indirect impact or in terms of both, direct physical and indirect impacts. Only one tour operator stated being merely concerned by potential direct impacts, while 44% or 7 companies believe that merely indirect impacts are threatening Namibia's tourism industry.

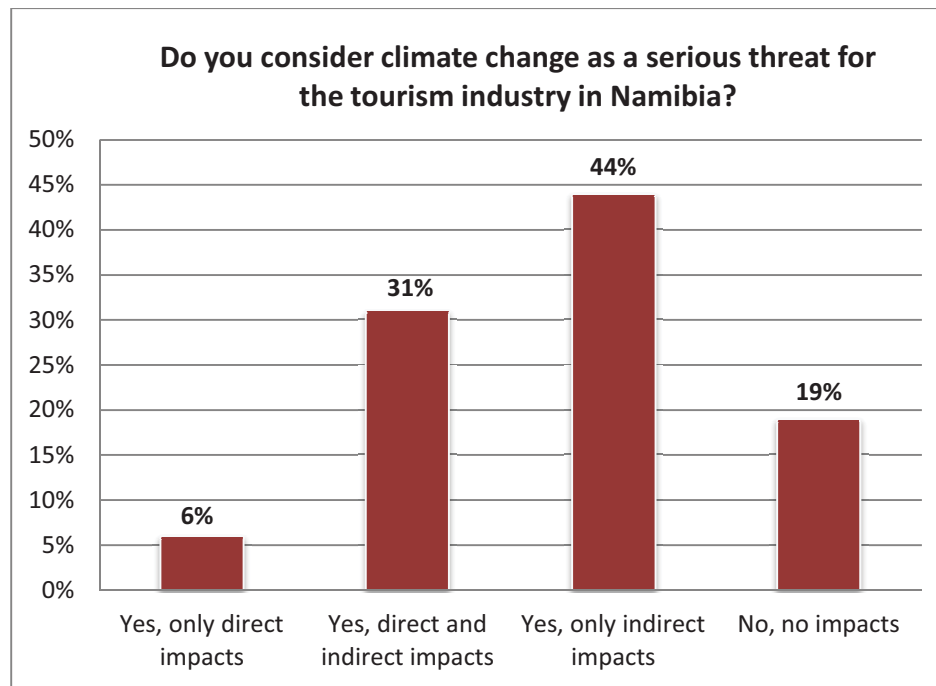


Figure 12 - Climate change's perceived impacts on tourism.

For the **direct impact**, different point of views became apparent. In fact, 66% of the respondents do not see any direct threats for the industry. As discussed in the previous sections of this chapter, the impact of climate change or their intensity on the environment cannot be exactly forecasted in Namibia or elsewhere. As an example, one operator, who believes the draught and spreading of the desert could become a danger, puts this uncertainty into the following words:

“It depends how extreme you mean by climate change, if you are talking about the sea levels rises by two or three meters and Swakopmund and Walvis Bay are disappearing, then this is a bit of a threat. If you are talking about changing of the average temperature by even 2°C or 3°C that is a threat, because semi desert becomes desert and potential agricultural productive land becomes lesser and also game will suffer, so that is a potential impact if it goes that way, but not even scientist are unified about the climate change.” (Webb-Bowen, 2011)

A few other tour operators think a change in the weather could become a threat for the industry, e.g. if it starts to rain more in the low season, as the following statement reveals:

“I think climate change has and will have a great impact on tourism in Namibia. During the rainy season, the roads are damaged and flooded and the infrastructure also affects the tourism. If it is raining a lot, people don't want to come to Namibia anymore.” (Uanguta, 2011)

In terms of **indirect impact** caused by climate change, almost all tour operators agree that particularly rising flight prices will become more of an issue for tourism development in Namibia. Additionally, rising climate awareness was stated as potential indirect impact. Jacobsohn (2011) sees as the bottom line of the threat that: *“developing countries like Namibia risk losing tourism revenue, because the wealthy elites of the developed world travel less”*. Several operators are

convinced that tourists will yet continue to fly to Namibia, because of the country's uniqueness and only adjust other travel expenditures. One operators' quote can be used to exemplify display the common opinion: *"Namibia is a destination where only people come, who decided to go specifically to Namibia. Once they have decided that they want to come, they work out their budget. They might choose something cheaper in the future, but they will still come to Namibia"* (Brinkmann, 2011).

A few tour operators do not consider climate change as a threat in any terms for the tourism industry. It is noticeable, however that more than just these few tour operators are quite sceptical about the actual existence of climate change and about what impact a changing climate could actually be held accountable. This shows that a number of companies do fear indirect impact of a phenomenon of which existence they are not convinced.

In regard to tourism industry's impact of climate change, the majority of tour operators do not think that tourism in Namibia contributes significantly to climate change. The size of Namibia, its small population and the lack of heavy industry are stated as main reasons for that judgement. Only the long-haul flight to reach Namibia is often acknowledged as having a negative impact on the climate. However, with inbound operators the opinion prevails that the outbound operators have to deal with the GHG emissions of the flights.

Estimation of Awareness among Customers

The tour operators have dissimilar impressions on their customers' awareness of climate change and their impact on the climate. The estimations differ between the tour operators from "not at all aware" to "very aware". A few companies were also unsure about it, as statements like the following show: *"I have no idea of the climate awareness of our clients, nobody asks for it. We have a feedback system, but no comments so far on climate issues"* (Whitelock, 2011). In numbers, eight out of the 16 interviewed companies believed that their customers are aware of climate change to a certain extent. Several further respondents assumed that the travellers might be "climate sensitive" in their home countries, but the topic of climate change would lose its importance at the holiday destination: *"People who do long-haul flights might think about it and maybe they book with an airline where they can offset their emissions and they pay a little bit extra for their seat, but once they arrive, they do not care anymore about climate change"* (Burton, 2011). Furthermore, the majority of tour operators do not believe that climate protection already influences travel or company choices of travellers. As an example, Wayrauch (2011) is be quoted here, who claims that *"climate protection does not play a big role in the travel decision. The people are indeed informed, but climate change is not tangible and air travels are simply part [of modern*

life]”⁴⁹. Other operators are less sceptical and look at it from a different perspective: “*climate change discussions have brought up an awareness of people’s carbon footprint and awareness of environmental impacts. That also might have an impact on how people choose how they travel*” (Cook, 2011).

Concerning the climate awareness among customers of different nationalities, it is interesting to note that about half of the operators have the impression that German tourists are “far more aware than all other nationalities”. The other operators, however, claimed to have noticed that North American and especially British travellers are more sensitive to climate change than those from Germany. This was also concluded from increasing inquiries in this regard from British outbound tour operators. It can be seen as surprising that no correlations between main source markets and the described awareness results were found by analysing the outcomes. Notwithstanding these different estimations, all tour operators agree that their clients are highly price sensitive, but also noticed differences. Overall, particularly German, but also Scandinavian tourists are said to be “*quite careful on what they spend their money on, compared to Americans who tend to be rather careless on how they spend their money*” (Webb-Bowen, 2011). Obviously one needs to exercise great caution here to avoid national chauvinisms.

In summary, the results show that Namibian tour operators do not yet study their customers’ climate awareness, for instance through climate-related questions on feedback forms. In spite of that, most of the interviewees claim to have a good understanding of their customers and their spending patterns. However, quantitative research into climate change awareness and how this influences customer decisions seems vital to know for a tour operator’s business development, for instance if financing and marketing strategies should be developed for carbon-offsetting projects.

Opinions on Climate Change Mitigation

Clearly, Namibian tour operators acknowledge climate change as an issue the industry and every person in general should be aware of and currently see climate protection as part of a general environmental protection strategy by the operators. Without exception, all interviewees believe that tour operators should be pro-active and adopt measures to mitigate climate change instead of waiting for “climate regulations” to be put in place. The following quote outlines the common attitude in the tourism industry quite well: “*Pro-activeness has to come from our side, the industry. We are the ones who know what is taking place and we have to speak out and bring this awareness to the government and telling them what is taking place and this is what we think could be done. Then the government can react and also assist and get the others onboard*” (Uanguta, 2011). This mutual agreement on pro-activeness and the fact that the majority of tour operators consider self-

⁴⁹ Translated by author from the original quote: „Klimaschutz spielt keine große Rolle bei der Reiseentscheidung. Die Leute sind zwar informiert, aber Klimawandel ist nicht greifbar und Flugreisen gehören einfach dazu“ (Wayrauch, 2011)

initiatives as the preferred way for climate protection is not astonishing, as all operators are already voluntarily and “pro-actively” involved in a number of social or conservation projects. Moreover, in regard to further questions such as on environmental standards, the impression was given that the companies interviewed generally do not wait until governmental regulations are being implemented, but prefer to remain a step ahead. Only three of the companies are convinced that without legally binding regulations, tour operators would not adopt any climate mitigation measures, because of financial reasons: *“the government has to regulate, there is no way that anybody will do something which costs money unless it is a regulation”* (Whitelock, 2011). They argue further that sets of laws should be developed to include all operators and evade economic disadvantages of those companies who are actively involved in climate protection. It was frequently noticed that tour operators put their own statements into perspective during the interviews, such as the last quoted operator who further added *“though, in the tourism industry, you can always use carbon mitigation as a marketing tool if you do it voluntarily”* (Whitelock, 2011). Some interviewees, however, were confronted with this topic for the first time, and it can be assumed that they still have to further consider this topic before determining an opinion. Nevertheless, seeing more advantages in self-initiatives represents the prevalent opinion. Apart from marketing reasons, the tour operators explained this preference with being able to influence the actual mitigation measures and their development, compared to having to comply and cope with binding regulations. It is also often feared that governmental regulations would comprise a rather low standard and they tend *“to have quite a slow implementation which often hampers productivity”* even though *“there are certainly some merits to have certain regulations”* (Swanepoel, 2011).

When asked, if the tour operators think it will get more important in the future for tourism stakeholders to take action in climate protection, 70% of the companies agreed. The rising significance is mostly explained with increasing market demand that is expected and therefore competitive reasons. The following quote summarizes well a number of frequent comments: *“what may happen is that tourists will be made to feel guilty when flying long-haul, so they will not only ask for but insist that there is some kind of carbon-offset. The question will come from the public, I will only book that travel when there is sufficient carbon offset included in their holiday arrangement, so that they don’t have to feel guilty anymore”* (Webb-Bowen, 2011). A few operators also highlighted that their outbound partners are increasingly asking for more climate- and environmentally friendly tourism products. In this regard, several operators also mentioned that “greener tours” were currently developed for the next tourism season.

Current Climate Protection Measures and Compensation Projects

It was noticeable that no separation was made between environmental and climate protection measures, when asking about mitigation measures. Almost every tour operator answered, in the

first place, to recycle in their office and try to reduce the consumption of water, energy and paper. Additionally, it was stated several times that waste was collected during the tours and brought back to Windhoek to be recycled. As further measures on the tours, the operators stated to save fuel wherever possible and use newer, cleaner and more fuel-efficient vehicles, although this measure was rather taken because of economical and comfort reasons. However, first the impact of their vehicles on the CO₂ emissions of a trip is rather small compared to the fuel burned during the flights and second, newer vehicles tend to be larger, more powerful and may use more air-conditioning, all of which reduces the potential gain in fuel efficiency. It became obvious that the many companies would like to save more energy, but do not see any possibilities due to the high standard demanded by their clients. This predicament also concerns the size of groups as explained, for instance, by this operator *“we started last year to increase our group size so we can take a larger bus with more people to lower our footprint. A bigger group for us is a bus with 12 people, but we received negative comments about the large busses from the customers”* (Burton, 2011).

Most tour operators expressed their interest in choosing lodges that are more environmentally friendly. They declared, however that this would not be feasible so far in Namibia for group travel since the choice of “greener” lodges would be very limited and not on the route: *“if we had a big enough sample of lodges to choose from that meet our basic criteria, then potentially choosing an accommodation according to their carbon emissions could be a criteria, but at the moment that is not the case”* (Swanepoel, 2011). The current environmental performance of Namibia’s lodges was rated quite high by several operators, for instance: *“in Namibia, the lodges are probably the most advanced compared to other countries, quite a few have solar panels and minimize their wastewater”* (Cook, 2011). It was, however, also indicated that many lodges would not use their potential to reduce carbon emissions by using renewable energies and increasing their energy efficiency, for instance with improved or alternative air-conditioning systems and solar thermal hot water.

As for solar energy, a number of operators expressed their intention of installing PV panels on their office buildings, specifically for economic reasons. The companies interviewed that also operate lodges, guesthouses or backpacker hostels mostly stated that they already use solar energy to a certain extent. It was remarkable that the payback periods of solar panels mentioned, differed largely between the interviewees and ranged from three up to twenty years. One accommodation provider, who is highly involved in conservation activities, but does not use renewable energies, reasoned the very long payback period for solar panels with the high prices of the systems in developing countries. It became obvious that solar energy is omnipresent in Namibia when talking about energy production and does play an increasing role in Namibia’s tourism sector.

Nevertheless, the hurdle of high initial investment costs is clearly hindering a more widespread use of solar power despite its long-term economics.

The research further revealed that only Wilderness Safaris, a large tour operator that also operates upscale camps, lodges and an air charter, calculates its carbon emissions of the tours, office and accommodation facilities. Wilderness is also the only company striving for carbon neutrality and aims to offset all the carbon emissions of its operations in the near future (cf. Carlyon, 2009; Wilderness Safaris, 2010). So far, none of the tour operators yet compensate GHG emissions of any activity. The company has calculated its carbon footprint since 2008 and publishes its performance in an annual sustainability report. In contrast to the other companies Wilderness Safaris also has a climate management plan with strategies to reduce carbon emission and already uses solar energy at most of its camps. As a further example, Wilderness Safaris hands out refillable water bottles to all customers on its tours and installed water filtration plants to reduce plastic bottles (Wilderness Holdings, 2011). Somewhat contradictory to all those “eco-approaches”, Wilderness offers many energy-intensive fly-in safaris using their own air charter. Therefore it seems doubtful that the overall climate performance of a typical trip with Wilderness Safaris is superior to one with another operator, who do not adopt mitigation measures but abstains from offering fly-in safaris or energy-intensive leisure activities such as quad biking or scenic flights.

Compensation Initiatives:

In regard to offsetting projects, it was found out that two companies initiated climate projects and one company cooperated in the past with an offsetting provider. The operator Ultimate Safaris was involved several times in tree planting projects in a northern part of Namibia. In this case, transportation for the trees was provided for the offsetting organisation “Flying Forest”. NatureFriend Safaris, a tour operator specialized in tailor-made fly-in safaris, manages an own sustainable project called “Sunstoves Namibia”. In addition to providing social benefits as its main intention, the project also helps avoiding carbon emissions by replacing firewood as the energy source by the sun. In the price of each tour, a contribution of N\$150 is already included to sponsor the project. With the money, solar stoves are constructed and distributed in rural communities to needing families and communities. The project is part of the company’s social responsibility activities and is not necessarily intended to be a competitive advantage. The managing directors said in this regard “*the project is described on our website and also communicated, but until now we didn’t receive any feedback from the customers. I don’t think that it has an influence on the bookings*”⁵⁰ (Borg, 2011).

⁵⁰ Translated by author. Original quote: “Das Projekt wird auf unserer Website beschrieben und auch kommuniziert, bisher gab es aber kein Feedback von den Kunden. Ich denke nicht, dass es einen Einfluss auf die Buchungen hat”(Borg, 2011)

A different approach is chosen by the operator Springbok Atlas who is preparing an offsetting project that shall also be advertised in marketing materials for competitive reasons. The project is about reforestation of areas in northern parts of Namibia, where Springbok Atlas' tours pass through to be able to involve the travellers. In cooperation with the Ministry of Forestry, it is planned that, in the framework of several round trips, the customers visit the project site and witness where two to three trees per travellers are being planted in order to compensate their travel emissions. The cost of the native trees is covered by a donation of N\$10 that is going to be included in the travel price.

That tree planting projects can be problematic was already discussed in previous chapters and it also came up in this case study. It was found out that one tour operator has considered the participation in a compensation project, but decided against as it declared in the following statement: *“we have been approached to become involved in a tree planting project as a climate change offsetting measure. However, we could get no assurances regarding what trees were being planted where – indigenous versus aliens. And as the water table can be severely affected by planting the wrong trees in Namibia’s sensitive environment, for example, we stayed out of this”* (Jacobsohn, 2011).

Motivations for Climate Initiatives

The motivation of tour operators varied from pure altruism, meaning that “everybody needs to do something”, over fulfilling the customers' expectations, to expected competitive advantages in the future (“we will have a competitive advantage over other organizations and keep our eco-friendly approach in our operations” (Wilderness Safaris, 2010:9)). Of course, economical reasons, for example in regard to energy-savings, were also stated. The following quote can be seen as representative for many attitudes of operators: *“I am always interested in becoming climate friendlier, but I don’t believe people are currently becoming more aware of climate change and choose the operators according to their climate performance”* (Burton, 2011). Even though the interest in the topic seems to be there, most operators seem to be unsure on how to get involved in climate protection and what possibilities there are for tour operators. They often mentioned that only accommodation provider could adopt measures, but tour operators, in contrast, would not have any opportunities.

Knowledge and Interest in Carbon-Offsetting

To research the state of knowledge on carbon-offsetting in Namibia's tourism industry, the tour operators were firstly asked if they have heard about the concept of “carbon-offsetting” or “carbon compensation”. The result was that almost all tour operators have heard about it, although a few operators confessed just having heard the expression without knowing what carbon-offsetting is

about. Figure 13 displays that out of 14 operators that have heard about the concept, only four operators stated having delved into the details of carbon offsetting and, for example, also knowing different standards and having an own opinion on it. This finding can be interpreted as climate change is on the one side acknowledged as a global issue, but in Namibia it is not yet enough apparent that four operators concerned themselves with possible mitigation measures. Because of that, it was rather surprising to find out that three operators were or are involved in offsetting activities or will be in the near future.

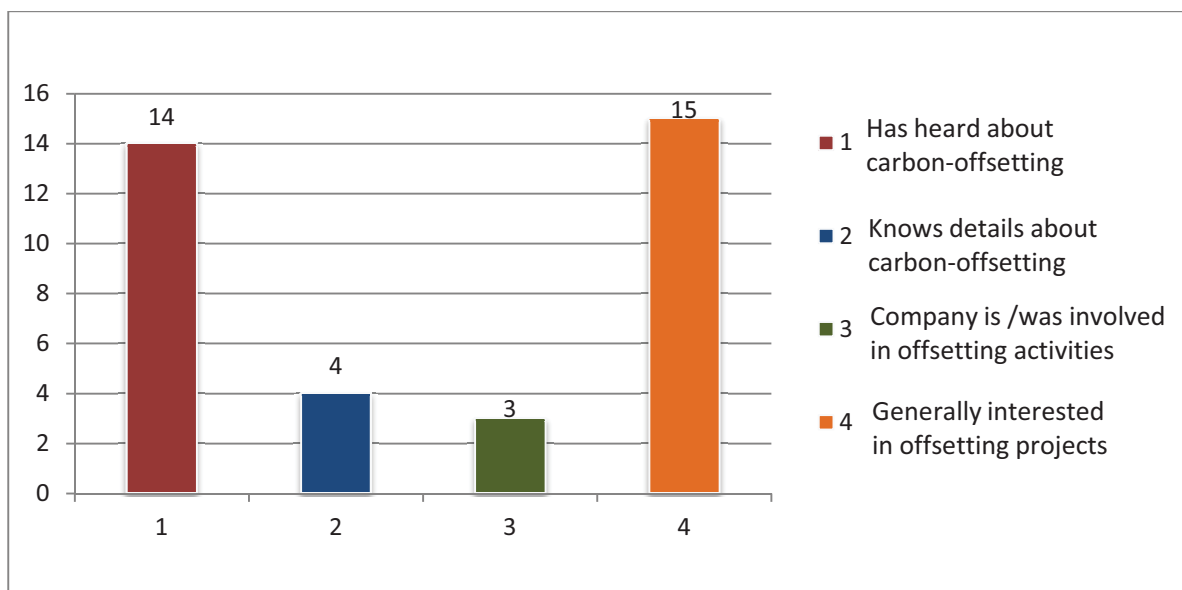


Figure 13 - Tour operators' interest, knowledge and involvement in carbon-offsetting.

Those respondents who already had an opinion on carbon-offsetting were generally quite sceptical about it or had a negative opinion. One obvious reason for the scepticism was uncertainty concerning the compensation project itself: *“who checks the project, where does the money go, anybody can set up a website and do offsetting, but who monitors it and makes sure that it is not absorbed from the company itself? I don’t know if there are any checks and balances in place so far”* (Burton, 2011). Another operator focused on the concept, especially in regard to the CDM and states *“all the problems/confusion, inconsistencies surrounding national/international accounting of carbon offsetting etc. bothers and hinders involvement”* (Jacobsohn, 2011). Generally, the opinions on offsetting from some further respondents were rather negative. One criticism was that customers are misled to say that if they offset, they do not have to do anything else in terms of climate protection.

Tour Operators' Attitudes, Ideas and Needs for Potential Offsetting Projects

Despite the predominant lack of in-depth knowledge on carbon-offsetting, the scepticism and also the few negative opinions, all operators⁵¹, stated general interest in participating in carbon-

⁵¹ with exception of the accommodation provider

offsetting. The same mutual agreement was also noticed before, when asked if the operators were willing to become climate friendlier. Both outcomes should not be overrated, as social desirability of the responses needs to be kept in mind. As an answer that indicates indifference in regard to climate matters would not be well received from society, it can be assumed that even operators that are not very interested could have chosen a more socially favourable answer. The general impression received was that Namibia's tour operators are very open in regard to new climate projects and interested to "have a closer look" at them: "*we are always open to things which are put in front of me, whether I go for it or not at the end. I would be willing to look at the offset project and then I would have to assess it on an independent basis, just to see, can we do something like that, how would we be presented on the website and then we would see how many people would actually be interested in it*" (Burton, 2011).

Marketing aspects Also were often mentioned in this regard, for instance: "*if something like a carbon offsetting project would be operating in Namibia, we would be interested in it. We are definitely interested, especially because we could use it as a marketing tool, if there are benefits for Namibia, we can put it on our website*" (Whitelock, 2011).

Many operators indeed welcomed the idea of carbon offsetting, but clarified that Namibia firstly needs to deal with more important problems like poverty, before taking care of the climate. The concerned operators highlighted the crucial importance of social benefits of any project for the local population: "*what Namibia actually firstly needs are the basic supplies, sanitation, schooling and electricity for everyone. We have to consider the main issues first; a potential project is fine if it is going to help the local people*" (Cook, 2011). It also became apparent that operators have had negative experiences with projects in Namibia that mostly failed because of lacking funds, although the original ideas were considered good.

The respondents were furthermore asked if, in the hypothetical case of planning to compensate any emissions, they liked to cooperate with either an offsetting project provider, other tourism companies or rather develop an own project. This study revealed that 81% of the operators prefer cooperating. For the majority, it is out of question to develop their own project due to lack of competency and resources. The predominant opinion among the companies can be summarized as "the more companies participate, the better for the project". This preference was further explained, for instance, as: "*we would prefer cooperating, because we think that would be much more effective than us trying to start our own project. [...] NGOs are more effective at what they do, if we put our little bit to them, they are actually able to do something significant*" (Brinkmann, 2011).

Even the two operators that currently manage their own projects emphasize that both, own and cooperative projects can and should go hand in hand. They argue that climate and sustainable results are the important aspects and not the potential marketing opportunities for a single operator.

It clearly shows that Namibia's tourism stakeholders care about social and environmental responsibility and put common benefits over their own interests when it comes to such activities. Moreover, it also became apparent that the operators are willing to commit some time and effort when taking part in a project, if there is somebody who does the main work and if the project is meaningful and managed professionally.

Who should organize a potential offsetting project in Namibia?

Not all operators could spontaneously suppose a suitable project coordinator, but 50% of the companies agree that a conservation NGO should develop, run and monitor a potential compensation project in Namibia (figure 14). It was evidently stated by a number of companies that a governmental involvement of any kind would not be eligible, for reasons explained in the following quote: *“as soon as the government gets involved in such projects, it becomes much more difficult. I think a conservation organisation should run an offsetting project, because it is kind of a conservation projects, but they have to get the tourism guys involved. A neutral organization would be good, which knows how it works and how to run it and which collects the tourism people, they should also look after it. That would make it easy for us to participate, because our time is limited”* (Whitelock, 2011). If managed by a NGO, like the NNF as often suggested, it would be wished by the operators that tourism organizations such as TASA, HAN or the NTB endorse and communicate a potential project.

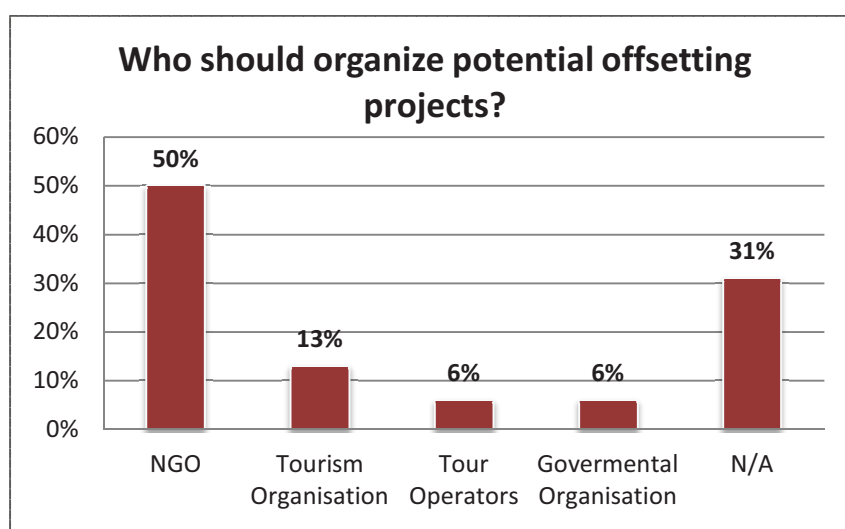


Figure 14 - Tour operators' Opinion on a Suitable Project Organizer.

As further displayed in figure 14, a few companies would instead prefer private tourism organizations, such as TASA, HAN, FENATA or Eco-Awards to manage offsetting projects. However, other operators are against that idea and argue that they do not belong to any organization and therefore fear to be excluded, if the project is only open for TASA members e.g.

The last option, not having any institutional body in between the tour operators and the project was also wished by an operator, as a measure to secure that all money reaches the project.

One further interviewee shall be quoted here, as she came up with a cooperative model of governmental organisations, such as the NTB, with a NGO to combine both strengths. She explains that *„in terms of climate protection, it is much more a governmental concern than a concern of the tourism industry and the tour operators, so if the government takes the initiative and looks for cooperators, that would be good, because as tour operators, we don't have the power”*. She continued that the government should then *“incorporate the tour operators and give the mandate to e.g. the NNF”* (Uanguta, 2011).

Independently of who manages a possible project, the tour operators stressed that participation should only be considered, if absolute transparency and social benefits for the local populations were assured. Another vital factor for involvement was outlined by the following operator, who said that *“it is very important in such a country like Namibia that the projects are run by Namibians and do not come from the outside, like foreign consultants who come to the country and then go again, the Namibians have to take ownership of any particular project and as a consequence it is important to have the information, guidance and support, but it has to be Namibian driven”* (Cook, 2011).

Despite the enthusiasm some tour operators showed regarding the idea of an offsetting project in Namibia, it became clear that the operators will most likely not launch a project. Climate projects are currently not a priority and the initiative would therefore need to emanate from one of the mentioned organisations: *“for example, the NNF should come with a proposal, we will not be running behind the carbon offsetting, rather take care of other environmental issues”* (Brinkmann, 2011).

Financing:

Concerning the way offsetting projects could be financed, some tour operators had spontaneous ideas in mind, while the majority needed time to consider different options. The tendency was to start with offering the customers to voluntarily offset their emissions and monitor the clients' willingness to pay. Further ideas were to show the projects to the customers and invite them to donate or including a fixed share in the price as already practiced by the two operators with own projects. One operator introduced an idea to reward tourists that emitting fewer carbon emissions by using more climate-friendly travel options: *“an idea would be to create a carbon offset levy and if a customer really would like to fly, he has to pay more, if he uses a smaller, more efficient car he pays less”* (Brinkmann, 2011). This idea sounds very straightforward and lends itself to immediate

implementation almost automatically for economic reasons as faster or more comfortable means of travel not only tend to emit more CO₂ but also cost more. Levying an additional fee related to the CO₂ emissions of each travel alternative will increase these cost differences and make less climate friendly options even less attractive for the customers. Whereas most of the previous proposals as already practiced by the companies do not differ from sponsoring social or environmental projects, the last idea focuses on the actual issue: carbon emissions directly caused by transportation used in the travel industry.

Project preferences:

Most operators could not think yet of any preferences regarding the type of a potential offsetting project and most expressed that the organisation who develops the project should choose the kind of project that is most suitable and most sustainable, because “*we tour operators are not the experts for the topic of climate protection*⁵²” (Ihms, 2011). Many tour operators, however, stated that the project needs to be local in order to monitor its development and emphasized again the importance of community benefits. As an example project, several operators mentioned the investment in solar panels to replace diesel generators, which would otherwise not happen due to the high investment costs. It became clear that not the type of project, but its significance would be the determining factor for tour operators to consider a participation: “*I would also be quite careful with the merits of projects I’m getting involved, I don’t want to jump on just any project, it needs to be clear what they are doing is meaningful. A project needs to have something measurable to say that project is meaningful*” (Swanepoel, 2011).

A general interest in including a visit to an offsetting project into their itineraries was expressed by 70% of the operators. Evidently, a number of preconditions were named in this context, before the tour operators would at all consider visiting the projects. It became apparent that if the tour operators really wanted to offer to visit an offsetting project, would strongly depend on the factors:

- **project location** (is it on the route or accessible without major detour?)
- **attractiveness** to the tourists (does it have interesting elements for the customers to see that makes it worth visiting?)
- **people** at project site (is a visit desirable for them, do they benefit from the visit?)

One operator sums the requirements up as “*if you’d like to be able to visit the projects, it needs to be somewhere where the tours go already, where there is traffic but also where there is population. You need the community to demonstrate the visitors the impacts of what it is having and also to look after the project*” (Webb-Bowen, 2011).

⁵² Translated by author from the original quote: “Wir Tour Operator sind nicht die Experten zum Thema Klimaschutz” (Ihms, 2011)

The general idea of visiting local projects is not new to Namibia's operators and many already include visits to social or environmental projects into their tours. The majority of tour operators, who would also consider visiting climate projects, would rather offer it to their clients as an option than to include it as a scheduled stop into their tours. Nevertheless, some companies do not think that an offsetting project could be of any interest for their clients or do not consider a visit necessary: *"unless there are any benefits for the community as a result of the visit, I wouldn't consider doing it. But the question is, if it does have to be a touristic thing or is it not enough if the community benefits"* (Cook, 2011).

Springbok Atlas, the company that is planning a reforestation project, said that they exclusively choose areas for the project where many travellers pass anyway on their tours around Namibia. The feasibility of visiting the sites and involving the customers into the planting process would be a crucial part of the project. Also NatureFriends Safaris said planning to offer their clients the possibility to visit the community where the solar stoves are being built. Alternatively, a map is planned on which all distributed stoves are shown and to encourage customers to visit the local communities. Those could benefit from the travellers, for instance, by selling food prepared in the solar stoves.

5.7 Discussion

It is noteworthy that the response rate from contacted companies was very high. Despite being the height of the tourism season, out of 24 contacted businesses, 17 immediate and positive replies were received. Within a short time after first contact, 15 face-to-face interviews were conducted and one questionnaire completed. Apart from a very few exceptions, it has been the managing directors of the tour operators who were available for the interview. Both factors, the high response rate, as well as the fact that the companies' directors themselves took their time for an interview could be regarded as an indication that climate change is considered as an interesting and even important topic among the tourism stakeholders in Namibia. Some of the companies were contacted after the interviews to verify this hypothesis and obtain further information about the operators' motivation to being interviewed. In regard of reasons why the operators agreed on being interviewed, they stated concordantly that there are not many studies on Namibian tourism, and that they are open to new ideas and development in the industry. The fact that somebody conducts a study in general on tourism in Namibia, and thus information and ideas could potentially be gained seemed very attractive. Paul Brinkmann, managing director at *Sense of Africa*, added that the benefits of an interview would be mutual, as he not only provides information, but also receives

Preference of <u>co</u> operation versus <u>own</u> project to compensate emissions	co	co	co	co	op	co	co	co	co	co	op/c o	co	co	co	co	co
Who should organize such projects? <u>NGO/ Gov/ Tourism Organisation/ Tour Operators</u>		Gov /N GO	N G O		T O	N G O			N G O	N G O	T Org	N G O	N G O	T Org	N G O	
Generally interested in visiting an offsetting project?	x	x	x	x	x	x	x	-	x		x		x	x		

First of all, no correlations were found between company sizes, tourism products, price category or source market and any of the researched questions, by analysing and comparing the operators' responses. The results seemed, in fact to depend almost exclusively on the personal opinion and involvement of the interviewee. However, one tendency was observed in the three operators that do not see any threat for the tourism industry: they are all German speaking. Conversely, direct impacts are dominantly suspected by non-German speaking⁵³ interviewees. It can be interpreted as German speaking Namibian Managers trust more upon Namibia's uniqueness and believe that travellers from their main source market, Germany, would come in any case to Namibia, independently of any impacts of climate change. To discuss fully possible reasons for this interesting aspect, further research would be necessary. Regarding the one company who stated they considered climate change to be only a threat because of direct, physical impact, it should be mentioned that the interviewee worked as an environmental officer at this tour operation. Therefore, it could be assumed that potential indirect impacts, such as fewer tourists due to rising long-haul flight prices, do not fall into his main area of responsibility and might have been neglected.

Furthermore, it is interesting to notice that the three operators who have own climate projects do not consider their customers to be aware of tourism's impact on climate change. Moreover, these three operators stated to have heard about the concept of carbon-offsetting, but lacked detailed knowledge of it. This is especially surprising, as one of the projects, the reforestation one, is explicitly planned as an offsetting project in cooperation with the Ministry of Forestry in Namibia. It shows that some operators consider climate change as a problem and take initiative, but as they only want to develop a small project following their own criteria rather than any offsetting standard, the operators did not deal in depth with this topic. Overall, the impression was gained that none of the tour operators was interested in certified projects, which would generate carbon credits to be sold on the carbon market. They seemed much more willing to invest some time and resources into a small but tangible project from which the climate and local people could benefit alike.

⁵³ The term "non-German speaking" is used in this case, as all interviewees obviously spoke English. This was not necessarily his or her mother tongue as it can be said for the German-speaking Namibians.

The overview in table 8 also reveals that, from the three operators who believe governmental regulations are needed in regard to climate change, two of them do not see any kind of threat for the tourism industry. Even these companies stated they were interested in carbon-offsetting projects. These projects, however, are wished to be initiated and managed by an NGO or private tourism organisation without governmental participation. This can be deduced as contradictory, as they first preferred governmental involvement in climate protection over self-initiatives, but later objected to it in regard of offsetting-projects. Supposedly, these operators did not have carbon-offsetting in mind when favouring obligatory climate protection measures. It is likely that some operators would answer these questions differently if approached a second time and after having thought more about the topic.

It is also visible in the table that the accommodation provider (*Gondwana Collection*) is less interested in climate protection or carbon-offsetting projects than the tour operators, although being very active in nature conservation projects. While the incoming tour operators pointed towards the accommodation providers, arguing they could and should do more for climate protection, the lodge operator interviewed, in turn, argued that investments in renewable energy would be too expensive. This accommodation provider further adds that outbound operators should support local climate protection activities, for instance through communication of existing environmental initiatives to their customers. It seems as a lack of communication is part of the problem and to possibly improve the climate situation, all tourism stakeholders should act in concert, instead of pointing at the shortcomings of each other.

To answer the research questions, the study approved that concern and awareness of climate change is high among Namibian tour operators. It was observed that mainly those tour operators who feared negative consequences for their tourism business showed a reasonable understanding of climate change. The tour operators agree on pro-activeness and favour self-initiatives for climate protection, which shows the identified relevance of the topic; in contrast, knowledge of mitigation measures and in particular carbon offsetting is generally rather low. It is very obvious that despite the general “climate awareness”, climate protection is not high on the agenda of Namibia’s tourism stakeholders. The fact, however, that all operators expect this topic to become more important in the future, shows the potential of climate protection to become more popular in Namibia’s tourism sector. This is supported by the outcome that most operators do not assume their customers to be aware of climate change as yet, but think they will increasingly consider climate protection when booking in a few years time: *“that green influence is very real, particularly in Germany and Scandinavia, the question will come, and they want to be seen to be green, but I don’t think it will come in the next three or five years”* (Webb-Bowen, 2011). Already in 2009, and in the framework

of the RTEA⁵⁴, Davidson (2009) shed light on the potential impacts which might be caused by the increasing awareness of climate change amongst tourists from Namibia's main source markets. He points out that it is mainly tourists' concerns over global warming in relation to their flights which are likely to affect the tourism industry. That climate protection measures could be used for marketing reasons to reduce indirect impacts, is also acknowledged by Shangala (2011), marketing manager at the Namibia Tourism Board (NTB). She explains that *"climate change goes hand in hand with conservation, the effect that we already promote Namibia as an eco-friendly destination goes already into the same direction, but of course, it will still take a bit of time again, but it will definitely be a plus to use climate protection also for marketing purposes"*. Again, the outbound operators do not seem to use this marketing potential and Shangala (2011) adds that the NTB has not received *"many requests on information about concerning climate protection in Namibia from the outbound tour operators, but there are a lot of questions on eco-tourism and conservation tourism"*. This elucidates once more the influence that outbound operators could have on tourism destinations by demanding and marketing a specific development. Further research revealed that inbound- and outbound tour operators are not always aware of each other's climate mitigation measures. This became obvious as several Namibian tour operators claimed their outbound partners would offer customers to offset travel emissions, although no indication of this was found on the websites of the outbound operators. Sometimes, the opposite was observed, meaning that outbound operators offered carbon-offsetting, but the incoming partners were not informed about it. It can be said that the incoming tour operators do not deal directly with the long-haul flight to Namibia. It also seems that they are not willing to take responsibility for that part of the travel. It was discovered that the two interviewees who are working in Namibia as ground handler or destination manager of a multinational tour company, are not fully aware of the climate strategies of their company's headquarters. This is in particularly surprising, as those large tour operators both emphasize sustainability as a core value and both maintain environmental departments that also distribute donated money to different projects. Furthermore, both Namibian managers point out that they do not always have the authority to take environmental decisions.

The study showed that climate activities adopted by the tour operators are, at this stage, limited to a few basic measures to save energy. It seems, as if these actions are not stringent for all business operations and ideas to make advances in this field are missing. General interest in climate protection measures are surveyed to be very high among the tour operators, even though it is difficult to estimate the influence of social desirability on the responses. The same applies to the stated interest in carbon-offsetting projects. Obviously, a general interest does not mean that the tour operators would definitely invest time and money into a potential project. However, taking into consideration that most of the operators did not yet deal with this topic before being

⁵⁴ Rapid trade and environmental assessment, conducted for the Republic of Namibia in 2009.

interviewed, the outcome shows again that the companies are open to new ideas and opportunities. The only preferences that were revealed regarding the type of offsetting project were that it had to be sustainable in all aspects: provide benefits for the local population and be financially secure for the future. These results can be interpreted as displaying caution on getting involved in “any kind of project” from the operators’ view and signifies the importance of high standard offsetting projects for Namibia. It can be hoped that the newly initiated reforestation offsetting project by Springbok Atlas is going to be more sustainable than previous forestry projects in Namibia, for example the one that Ultimate Safaris supported. According to Ultimate Safaris, the project was not always successful, as the last set of trees died due to draught. Internet research revealed that a second Namibian tour operator stated cooperating with the same offsetting agency called “Flying Forest”. Both companies seemed to be unaware of the fact that Flying Forest ceased its operation a few years ago, as stated by an interviewed outbound tour operator (McIntyre, 2011). This shows on the one hand that these operators involvement in offsetting happened infrequently. On the other hand it confirms that reforestation projects cannot guarantee real compensation for GHG emissions. While Springbok Atlas’ reforestation project will take place in cooperation with the Namibia’s Ministry of Forestry, the Ministry of Environment and Tourism (MET) considers the possibilities for Namibia to generate revenue through offsetting projects with CDM. In 2010 the MET reported that Namibia would be “unlikely to be able to generate significant revenue from afforestation and reforestation type carbon projects” but sees opportunities for “other types of carbon projects, such as concentrated solar power and small-scale biomass energy production that are worth exploring” (MET, 2010:149).

Challenges and Needs

In regard to climate mitigation measures, the tour operators mentioned a number of challenges. For instance, it was stated as rather difficult to save energy on transportation, because the customers wish to see as much as possible of the country. Moreover, the clients are said to demand comfortable cars, high standards in accommodation and prefer small groups. At the same time, customers would like the operators to be as climate friendly as possible to comfort their own conscience. Obviously, these considerations can easily contradict each other and place an additional challenge on Namibia’s tourism industry. The question also came up in the interviews regarding who should pay a potential offsetting fee, as the competition in Namibia’s tourism industry would already be very high. It was revealed that most tour operators feared a loss of clients if an extra charge were added to the tour price. The tourists are not yet anticipated to be willing to pay more to offset their emissions and are described as very price sensitive – even in the luxury travel segment. That this does not necessarily need to be the case can be seen from the example of NatureFriend, as the company includes a donation of N\$150 into each tour. Although this donation can be opted out, almost all customers pay the fee. The company stated not having

lost any business because of the inclusion, but on the other hand it is not yet thought to provide any competitive advantages either. It can be concluded that a key challenge will be to find a balance in the climate donation that is not too expensive, to avoid a decrease in customers, but sufficient to compensate the travel emissions in order to actually mitigate climate change. It poses a further challenge in communicating climate mitigation measures to the visitors and convincing them to pay a compensation fee, without making them have a bad conscience by travelling to Namibia. According to Brouwer et al. (2008), the major reason for travellers refusing to pay an offsetting fee is the disbelief that their offsetting fee will make a real impact. To improve the credibility, a good communication strategy on carbon-offsetting and high standards in projects are necessary from both inbound and outbound operators. Visiting the project could hereby increase an offsetting project's transparency and makes it more trustworthy.

The research questions included the topic of potential needs of tour operators when becoming involved in carbon offsetting projects. It is unlikely that the companies themselves start offsetting projects, apart from the two small projects from individual tour operators mentioned. Therefore the operators first of all need an organisation that initiates and organises a potential offsetting project. The tour operators expressed a desire for a trustworthy NGO, which has expertise in that field, to choose a suitable, local project to develop and also professionally manage it. The operators would like to see different tourism organisations in Namibia become involved in this project, and communicate it to their members. The coordination of all stakeholders would also lie in the hands of the responsible NGO who would manage this potential project. Furthermore, it was found out that the operators desire more support from their outbound partners. As the outbound operators are booking the flights, these companies are required to be involved to a certain extent. At the very least, these partners should communicate the climate protection activities to their customers and, if compensation is offered optional, encourage them to offset their travel emissions. To bring the tour operators on board, an organisation is necessary that takes on responsibility and guarantees absolute transparency as well as sustainability of the offsetting project. For such a project, not only a regular compensation fees must be secured, but also seed capital is necessary to develop it.

5.8 Conclusions and Recommendations

5.8.1 Conclusions

The development of tourism in Namibia is clearly depending on natural resources and therefore particularly vulnerable to climate change. Changes in tourist flows due to climate change and a resulting decrease in tourist arrivals in Namibia pose a serious threat to the country, as it greatly relies on long-haul tourism. Fewer income generated through tourism could lead to a slower or even reversing development and come along with the likelihood that the gap between affluent and

poor increases. Namibia's tourism industry needs to be pro-active and become prepared for climate related changes in order to minimise potential negative impacts. One objective of this case study was to examine tour operators' awareness and perception of climate change. Although many tourism stakeholders are not fully aware of and familiar with direct and indirect impacts of climate change, the awareness of climate change and its consequences is slightly higher than assumed before. Climate change is perceived as a threat to Namibia's tourism industry, predominantly in terms of indirect impacts. It was revealed that hardly any measures are adopted to mitigate climate change and that tour operators are generally unaware of the opportunities that can arise from climate protection activities for the tourism development. The first hypothesis that assumes that climate change is not a topic of high priority for tour operators in Namibia can therefore be validated. The general attitude in the tourism industry can be concluded with a quote of one operator "*we have no objections to becoming climate friendlier, but it is not a high priority for us at the moment*" (Webb-Bowen, 2011). This is likely to be due to Namibia's severe social problems, in particular poverty and unemployment. It can be concluded that climate change mitigation measures will become more attractive, if they contribute to alleviate poverty. Generally, there is a remarkable interest among the tour operators to learn more about carbon-offsetting. They also consider participation in an offsetting project, if it is fulfils all three aspects of sustainability and therefore makes environmentally, socially and economically sense. The tour operators do not prefer their own projects, but rather agree that the more operators would collaborate, the more successful the project will become. The results of this case study confirm the further hypotheses that were deduced from chapter 4. As assumed, to consider participation in an offsetting project, the tour operators stated that the following four aspects would be pivotal for them:

- the project takes place in Namibia
- the project is also generating community benefits in addition to saving emissions,
- the project is tangible and transparent
- the project can be used for marketing activities.

Finally, it can be concluded that there are good preconditions in Namibia to "get the tour operators on board" for climate mitigation measures and for the development of meaningful, sustainable offsetting projects.

5.8.2 Opportunities and Recommendations

Namibia could improve its preparedness to risks caused by a changing climate through climate mitigation and adaptation activities. The following recommendations highlight opportunities for Namibia's sustainable tourism development. First, for any future climate protection measures, it is important to survey customers' climate awareness, attitudes and preparedness to pay for carbon compensation. Furthermore, information should be gained on how climate change affects the target

group's booking decisions. The first step might be to include climate change related questions in customer feedback forms and then evaluate the answers. This information will help the tour operators to adapt their tourism products and marketing strategies to meet their customers' attitudes to climate change. Concerning destination marketing, there are many opportunities for Namibia's tourism sector in regard to climate protection. The majority of tour operators and lodges in Namibia maintain that Europe, especially Germany, are their main source markets⁵⁵. Despite the economic crisis, tourist arrivals from Europe have had the highest growth rates in recent years. Nevertheless, these growth rates of tourist arrivals are no guarantee for future growth, as many factors play a role in the development of the demand for tourism. One increasingly important factor, is that European travellers are becoming more aware of climate change, even though they do not yet seem willing to pay more for more "climate friendly tourism products". Attracting new markets to Namibia will therefore be another challenge. Wehrli et al. (2011) have also confirmed that "sustainable tourism products could be a successful differentiation strategy in order to gain additional market shares" and further reveal that there is a "target group of 22% sustainability aware tourists who consider sustainability as important when booking a holiday" (Wehrli et al., 2011:27).

Namibia's brand values have been identified as "natural", "rugged", "soulful" and "liberating" (TNN, 2010) and Namibia also promotes its conservation activities in marketing the country. Alongside this branding, climate protection with the ultimate objective of becoming "carbon neutral" should be adopted by the tourism sector and communicated to the customer. In expectation of rising climate awareness throughout source countries, the idea should be to position Namibia internationally as a "climate friendly" destination. According to Davidson (2009), "Namibia has an excellent opportunity to position itself as a leading sustainable tourism destination" (Davidson, 2009:4) by establishing a "destination brand" that includes climate, conservation and social components. To lower tourism's vulnerability to indirect climate impacts, such as increased awareness and rising energy and flight prices over the long-term, the focus should continue to be on upscale tourism, rather than targeting more price sensitive mass tourism markets. Also Gössling et al. (2009) advise destinations in this regard "to restructure their tourism products towards low-carbon and/or high value tourism" (Gössling et al., 2009:112).

Carbon Management

A key recommendation in regard to climate change mitigation for tour operators is to implement a carbon management plan, as described chapter 4. Through this strategic approach that also needs to be incorporated into the general business strategy, it aims to minimise all business related GHG emissions. As a first step, the tour operators should measure and analyse all identified GHG emissions and set reduction targets. The next step of the carbon management would be to reduce

⁵⁵ This became apparent during almost all interviews with Namibian tour operators. Only one tour operator stated that his source markets include visitors from African countries (50%).

the emissions as much as possible and monitor the climate performance over time. Obviously, to save GHG emissions tour operators should increase energy-efficiency in all business operation and use renewable energies as much as possible. In addition, tour operators should chose whenever possible and support accommodation providers that are committed to climate protection. In regard to the tourism product itself, fuel-intensive activities should be limited and, instead, preference should be given to low-carbon activities such as non-motorized sports. Education and sensitization of staff members and guides in regard to climate protection is important, as they are in direct contact with the customers and represent the company. Because of the long-haul flight, carbon emissions per day and tourist can be reduced by promoting longer stays but would not shrink overall. It can also be recommended to diversify the tourism activities to make it less vulnerable to possible climate change impact.

As GHG emissions can only be reduced and not completely avoided in tourism, carbon-offsetting is the only way to mitigate these climate impacts. Tourists, who already voluntarily compensate their flight emissions state a range a different motivations for their donations. Brouwer et al. (2008) surveyed the willingness to pay for carbon taxes and found that the main motivators are “traveller responsibility”, “environmental concern” (each 24%) followed by “future generations” (22%) then “avoid disaster” with just 12%. The results of such surveys are important in developing marketing strategies and promoting carbon-offset programs. To communicate climate credentials of tourism products and receive public recognition, committed operators could make use of environmental awards and certifications (cf. Zotz, 2010). As an example, the environmental label “Eco Mark Africa” certifies tourism businesses and requires emission savings and the use of renewable energies (EMA, n.d.).

It is important that tourists are educated about their travel emissions especially the action they could take to reduce their own carbon footprint. When communicating climate change to travellers, the positive aspects of climate protection should be emphasized, being careful to avoid creating sense of guilt. Good co-operation between in- and outbound operators is essential to inform customers about the climate impact of the tourism product at the time of purchase. Tourists, who are well informed about the concept of carbon-offsetting and learn about specific off-setting projects are found to be more likely to accept either a “climate donation” included within the price or voluntarily contribute towards projects. This was the conclusion of a number of studies that revealed a larger gap between environmental behaviour and general awareness when tourists are uncertain and do not understand the concept and effect of carbon offsetting (cf. e.g. McKercher et al., 2010). The way of introducing a potential carbon fee still needs to be discussed and its effects monitored and analyse over time.

Potential Projects to Compensate the Tourism Sector's GHG Emissions

Energy supply is a severe problem in Namibia's rural areas where only fifteen percent of the households have access to the electrical grid (Elephant Energy, 2011). The only source of electricity are often fuel-intensive gasoline or diesel generators. The tourism industry could utilise this opportunity to combine two good causes: by paying a compensation fee for their emissions to go to carbon offsetting projects and by sponsoring for their emissions, solar energy projects that provide also the inhabitants of rural communities with climate friendly energy. While the solar energy potential is very high in Namibia, it does not yet play a significant role in power generation (cf. Oertzen, 2009). The main reason as stated by a number of tour operators is the high investment cost. Through an off-setting donation or the launching of a "carbon levy", also some cost of solar panels within a chosen project could be covered, if that PV project replaces fossil fuel generation. Ideally, a potential off-setting project should be highly beneficial for the local populations in addition to reaching its climate protection goals. Therefore, Namibian off-setting projects should focus on renewable energies and energy-efficiency rather than reforestation projects which are not recommended for those reasons as stated in previous chapters. For the tour operators interviewed, the opportunity to follow the project's development was stated to be important. By locating the project at one of the frequently used tourism routes and making it attractive to tourists to stop, the tour operators could choose to include it into their itineraries as indicated by several interviewees. Including outbound operators in the projects was identified as vitally important. Several of the outbound tour operators interviewed in chapter 4 expressed interest in offsetting projects and if the communication between the partners is improved, more companies could collaborate to support off-setting projects.

It is highly recommended that one organisation pulls the strings to initiate an offsetting project in Namibia. For instance, a conservation NGO as favoured by the interviewed tour operators. This organising body should provide expertise as well as control the quality of the project. Alternatively, a coalition or reference group should be established to take on the same responsibilities. For developing of the project, it will be crucial to the success to have the buy-in of all stakeholders of the travel industry as well as the communities concerned. The entire project needs to be absolutely transparent with its benefits and effectiveness easy to comprehend and communicate. As the research showed that tour operators are not able or willing to invest much time or resources in a potential project, it should be easy for tour operators to participate so that as many companies as possible are involved.

An alternative approach would be to develop large-scale offsetting projects in Namibia that generate carbon credits. As a developing country⁵⁶, Namibia is eligible to host carbon mitigation

⁵⁶ Namibia is a non-Annex I party to the United Nations Framework Convention on Climate Change and therefore qualifies to host GHG mitigation projects to earn Certified Emission Reductions (CERs) (v.Oertzen, 2009).

projects and trade certified emission reductions (CER) on either the formal carbon market within the Clean Development Mechanism (CDM) or on the voluntary carbon market (VCM). Namibia should research the possibilities of benefiting from carbon trading through the CDM or VCM according to Jones et al., (2009). They also discern that Namibia admittedly has progressed in relation to involving itself in CDM-activities, however, to take fully advantage of the country's potential of CDM, additional support is required for institutional and project development.

Considering the long lead time of CDM or VCM projects and also the operators' preference of a tangible project, it is recommended that Namibia's tourism industry starts with a sustainable, although not certified off-setting project. This recommendation is supported by the fact that CDM projects have a complicated process of compliance and incur high transaction costs for external auditing (cf. e.g. Davidson, 2009). For the development of larger off-setting projects that fulfil the CDM requirements, it would be advisable to include governmental institutions such as the NTB and also Namibia's national airline to increase the off-setting volume and secure the project's permanence (also cf. MET, 2008). These future projects could be organized and managed by the Ministry of Tourism and Environment, for example in the framework of national climate protection measures independently of the tour operators' "own projects". Generated income from trading the carbon credits could be used to develop further environmental and social projects. It needs to be kept in mind that this case study focuses on the tour operators' awareness and attitudes, to fully assess carbon offsetting possibilities in Namibia, further research is be required.

6. Final Remarks

The literature analysis showed that climate change will certainly influence the tourism industry in the future, although a precise forecast is impossible since the development of the tourism sector depends on many factors and the actual effects of climate change are not well known. Tour operators are playing a key role in tourism's mitigation response and need to become pro-active in climate protection to tackle the anticipated problems of climate change. This thesis aims to give an indication on possible climate protection activities for tour operators and with a case study from Namibia explore exemplarily the interest and knowledge concerning this matter of tour operators in a developing country. As one of several instruments to mitigate climate change, voluntary carbon offsetting of GHG emissions is offered by a growing number of outbound tour operators. Even though the knowledge on carbon offsetting turned out to be limited, the Namibian inbound operators showed great interest in this topic. In this regard it needs to be mentioned that several of the international frontrunners portrayed in chapter four are actually outbound partners of some tour operators interviewed in Namibia. The present study indicates that there is currently little communication regarding climate change mitigation between the companies. This is particularly surprising as most "frontrunners" claim to focus on climate friendly tours and support partner companies in climate protection. This could not be confirmed by the inbound operators in Namibia. It seems that the cooperating partner companies do not know much about each others climate change mitigation activities or needs in regard to protection measures. Overall, a lack of involvement on the part of outbound operators was also mentioned by a number of inbound tour operators. They claimed that their partners abroad would instruct the tours and leaving the inbound companies with few options to mitigate climate change. In summary, the improvement of climate performance that is desired on both sides can only be achieved through better communication and cooperation between in- and outbound tour operators.

Within the scope of this study a limited number of climate change aspects have been looked at and some related issues have not been discussed at all. This study focused on the tourism industry's supply side, further research could help to understand the demand side in regard of climate mitigation measures and to optimise the tourism products and marketing activities. This paper should therefore be regarded as the starting point for further qualitative research that is needed in this field. In particular, this research could focus on socio-economic impacts of climate change and tourism and the expectation of tourists from carbon offsetting schemes. Concerning the case study, more research is needed on the feasibility of different types of offsetting projects in Namibia and their financial sustainability.

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Appendix A - List of Tour Operators Interviewed:

Company Name (Country)	Interview Partner	Position	Date of Interview
Chamäleon Reisen (GER)	Tom Andersch	Marketing Manager	21.07.2011
Colibri Travel (GER)	Thomas Gehlen	Managing Director	18.07.2011
Expert Africa (UK)	Chris McIntyre	Managing Director	12.08.2011
TUI Deutschland (GER)	Christian Carlé	Sustainability Manager	15.07.2011
Wild China (CHINA)	Samantha Woods, Nancy Tan	Marketing Manager, Manager Sustainability	21.07.2011

Completed questionnaire:

Company Name (Country)	Interview Partner	Position
avenTOURa GmbH (GER)	Stephan Daniels	Deputy Managing Director & Product Management
Intrepid Travel (AUS)	Jelina Mitrovic	Sustainability Manager
Small World Journeys (AUS)	Laurie Prichard	Managing Director

B – Interview Guideline Questions⁵⁷

1. **What is your company’s involvement in mitigating climate change/ reducing carbon emissions?**
 - a. What do you do on your tours?
 - b. At your office (reducing, using green energy etc)?
 - c. Do you offer customers to offset their flights?
 - d. Is the compensation already included in the price? Or do you use other arrangements, like: does a certain amount go into offsetting projects? Or do match/raise your customer’s contribution/donation with your own?
 - e. Do you offset e.g. your / your staff’s business travel?
2. **What is the main motivation behind your engagement in climate protection?**
3. **When did your company start to get active in this field?**
4. **What are the effects in general of your climate action?**
 - a. Did e.g. the bookings increase or go down?
 - b. How did the customers respond?
 - c. Did the customer satisfaction rise?
 - d. Did it affect the staff motivation?
5. **How would you estimate the awareness of climate change amongst your customers?**
6. **Do you use your commitment also for marketing/communication purpose?**
7. **How’s the response from your customers?**
 - a. If offsetting is optional, how many customers (in %) choose this option?
8. **Within your itineraries, do you include mostly/only accommodation, activities, transport etc. which are “climate friendlier” or do you encourage partners to reduce their carbon emissions?**
9. **Do you fund specific projects (e.g. in destination countries, only renewable energies...) with your offsets?**
 - a. What were your specific criteria to select those projects?
10. **Are you cooperating with offsetting project provider/partner?**
 - a. Why or why not?
 - b. Which criteria did you have to choose the partner?
11. *If applicable:* **Do you include visiting your climate projects in your itineraries?**
12. *If not described on website:* **Do you have / which are your local, national or international cooperation partners for climate mitigation measures?**

⁵⁷ The questions were slightly adapted for each company, depending on information already available on the companies’ websites.

F – List of Interview Partners in Namibia

Company Name	Interview Partner	Position	Date of Interview
&Beyond	Vernon Swanepoel	Manager	10.08. 2011
ATC Namibia	Monika Ihms,	Director	11.08. 2011
Camelthorn Transfers & Tours	Dinah Uangata	Director	10.08. 2011
Cardboard Box Travel Shop	Mike Whitelock	Managing Director	04.08. 2011
Chameleon Safaris	Jackie Burton	Director	03.08. 2011
Cheetah Tours & Safaris	Helmut Schäfer	Managing Director	04.08. 2011
Gondwana Collection	Mannfred Goldbeck	Managing Director	08.08. 2011
Kuoni Private Safaris	Martin Cook	General Manager	10.08. 2011
Nature Friends Safaris	Leander Borg	Managing Director	09.08. 2011
Pack Safari	Silvia Steinbrück	Transportation Officer	04.08. 2011
Sense of Africa	Paul Brinkmann	Managing Director	02.08. 2011
Springbok Atlas	Martin Wiemers	Executive Director	11.08. 2011
Tok Tokkie Trails	Barbara Wayrauch	Business Operations & Development	04.08. 2011
Ultimate Safaris	Martin Webb-Bowen	Director	11.08. 2011
Wilderness Safaris Namibia	Jack Chakanga	Environmental Officer	05.08. 2011

Completed questionnaire:

Kunene Conservancy Safaris	Dr. Margaret Jacobson	Trustee of Conservancy Safaris Namibia's Board	22.08.2011
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Additional Interview:

Namibia Tourism Board (NTB)	Johanna Shangala	Marketing / Trade department	22.08.2011
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E - Brief Introduction to the Tour Operators Interviewed in Namibia

Short introductions⁵⁸ to highlight the companies' characteristics and differences. Due to the fact that every interviewed company supports social and mostly also conservation projects in Namibia, those projects are not individually mentioned. More information can be found on the companies' websites.

&Beyond Africa (www.andbeyondafrica.com)

&Beyond Africa is represented by a very small ground handling office in Namibia. &Beyond Africa describes itself as "leading responsible luxury adventure tourism company" and started in 1991 as an ecotourism company under the name of "Conservation Cooperation Africa". The company offers private safaris and also runs upscale lodges throughout Africa.

Interview partner: Vernon Swanepoel (Manager Windhoek Ground Handling)

ATC Namibia (www.namibia-safaris.com)

ATC Namibia, founded in 1997, belongs to one of the major destination management companies in Southern Africa (African Travel Concepts) and is an affiliate company of the TUI Group. For Namibian proportions, the tour operator is rather large and mostly operates group tours, with 80% of its customers coming from Germany.

Interview partner: Monika Ihms (Director)

Camelthorn Tours and Transfers (www.camelthorntours.com)

Camelthorn Tours and Transfers is the first tour operator founded under the "black economic empowerment"- programme (BEE). Since 2005, Camelthorn is specialised in township tours and airport transfers but also offers tailor-made tours on demand. The company is the smallest of the interviewed tour operators.

Interview partner: Dina Uanguta (Founder and director)

Cardboard Box Travel Shop (www.namibian.org)

Cardboard Box Travel Shop calls itself a travel agent as it, in contrast to most tour operators in Namibia, does not have own vehicles. The company mostly caters for the FIT market, offering e.g. travel and reservation services for self-drive tours but also guided tours.

Interview partner: Mike Whitelock (Managing Director)

Chameleon Safaris (www.chameleonsafaris.com)

Chameleon Safaris (established in 1995) offers two scheduled 3-day "good value for money" safaris for small groups. The company is associated with Chameleon Backpackers hostel and since 2008 with its sister company Chameleon Holidays and Travel that adds tailor-made self-drives in different price ranges to the Chameleon portfolio.

Interview partner: Jackie Burton (Director)

Cheetah Tours and Safaris (www.cheetahtours.com)

Cheetah Tours and Safaris is a Namibian tour operator specialised in luxury travel and offers self-drive itineraries and guided private tours. The company is founded in 1992 and focuses on the German-speaking market.

Interview partner: Helmut Schäfer (Managing Director)

Gondwana Collection (www.gondwana-collection.com)

Gondwana Collection operates upscale accommodation establishments and camps throughout Namibia. In a small scale, also group tours and self-drives are offered. Since 1992, the company is engaged in nature conservation and owns four nature reserves.

Interview partner: Manfred Goldbeck (Managing Director)

Kunene Conservancy Safaris Namibia (www.kcs-namibia.com.na)

Kunene Conservancy Safaris (KCS) is a community-owned safari company, jointly owned by five conservancies. KCS's objective is to maximize tourism benefits for local communities and link

⁵⁸ In alphabetical order

conservation to social and economic development. KCS offers a range of scheduled small group tours including community-based tourism activities in the conservancies.

Questionnaire completed by: Dr. Margaret Jacobsohn (Trustee of KCS's Board)

Kuoni Private Safaris (<http://www.privatesafaris.com> and www.kuoni.com)

Kuoni Private Safaris is a subsidiary of the Swiss company Kuoni Travel Ltd. comprising several destination management offices in Southern Africa. The Namibian branch offers safaris and tourism services to individual travellers and small private groups. Its mother company, Kuoni Travel Ltd. established in 1906, has an own environmental stewardship, strives for more sustainable tourism and is actively involved in various environmental projects e.g. in the field of waste reduction, biodiversity and climate change.

Interview partner: Martin Cook (Destination Manager)

NatureFriend Safaris (www.naturefriendsafaris.com)

NatureFriend Safaris is based in Namibia and specialized in tailor-made fly-in safaris, but also offers self-drive and guided safaris for different budgets in Namibia, Botswana and Zambia. Within the framework of its social responsibility program, the company supports the construction and distribution of "sun-stoves" with a fixed contribution being already included in the tour price.

Interview partner: Leander Borg (Managing Director)

Pack Safaris (<http://packsafari.com>)

Pack Safaris is a medium sized Namibian company conducts group tours, guided private tours or organises self-drive tours in the southern African region. The company acts as an incoming agency for a German tour operator, therefore it receives about 90% of its customers are from Germany.

Interview partner: Silvia Steinbrück (responsible for transportation)

Sense of Africa (www.senseofafrica-namibia.com)

Sense of Africa (SOA), established in 1968 is "considered to be the biggest inbound tour operator in Namibia"(TNN, 2009) and is part of Tourvest, the largest tour operations in Africa. SOA accommodates mostly groups from European outbound tour operators but also offers self-drive itineraries.

Interview partner: Paul Brinkmann (Managing Director)

Springbok Atlas (www.springbokatlas.co.za)

Springbok Atlas in Namibia is a branch of the South African tour operator and destination management company, offering scheduled and tailor-made tours and transfer services in Southern and Eastern Africa for over 60 years. The company claims to be one of Southern Africa's largest tour operators.

Interview partner: Martin Wiemers (Executive Director)

Tok Tokkie Trails/Safaris Unlimited (<http://toktokkietrails.com>)

Tok Tokkie Trails is specialized in multi-day hiking and trekking tours for small groups in Namibia. Since its beginning in 1991, Tok Tokkie Trails functions as the incoming agent for a German outdoor tour operator.

Interview partner: Barbara Wayrauch (Business operation and development)

Ultimate Safaris (www.ultimatesafaris.na)

Ultimate Safaris can be described as being a medium sized tour operator for Namibian scales. The company offers tailor-made safaris and is specialized in small group tours. Its focus is on English-speaking source markets, especially from the United Kingdom and United States.

Interview partner: Martin Webb-Bowen (Managing Director)

Wilderness Safaris (www.wilderness-safaris.com)

Wilderness Safaris refers to itself as essentially being a conservation company that additionally sells tours and is dedicated to responsible tourism. Besides safaris, the company operates upscale lodges and camps for the last 28 years. Wilderness Safaris belongs to Wilderness Holdings Limited which is managed by offices in seven countries throughout Southern Africa and employs approximately 2800 staff members. The "Wilderness Group" also comprises its own air charter company.

Interview partner: Jack Chakanga (Environmental Officer)

F – Interview Guideline Questions

1. **Do you consider climate change as a serious threat for the tourism industry?** (both worldwide and in relation to Namibia)
 - a. In terms of direct physical impacts?
 - b. In terms of indirect (e.g. regulatory) impacts?

2. **Do you think tour operator should be pro-active and adopt measures to mitigate climate change?**
 - a. Where do you see advantages or disadvantages in self-initiatives compared to legally binding government regulation?
 - b. Do you think it will get more important in the future for tourism stakeholder to take action in climate protection?

3. **How would you estimate the awareness of climate change/ negative impacts of traveling on the climate amongst your customers?**

4. **Is your company already involved in mitigating climate change/ reducing carbon emissions? Or do you have any climate protection activities planned for the future?**
 - a. Within your itineraries, do you include mostly/only accommodations, activities, transport etc. which are “climate friendlier” or do you encourage/help partners to reduce their carbon emissions?
 - b. Do you take any measures at your office?
 - a. Do you offset your business travel?
 - b. Do you offer customers to offset their flights? How exactly do you do that?
 - c. Do you offset yourself? Is the compensation then already included in the price? Or does e.g. a certain amount go into offsetting projects? Or do you match/raise your customer’s contribution/donation with your own?
 - d. If offsetting is optional: how many % of your customers is choosing to offset?
 - e. What kind of compensation projects do you use?

Skip questions 5-8 if company is not yet active in the field of climate protection

5. **What are your main motivations as a tour operator to voluntarily be engaged in mitigating climate change?**

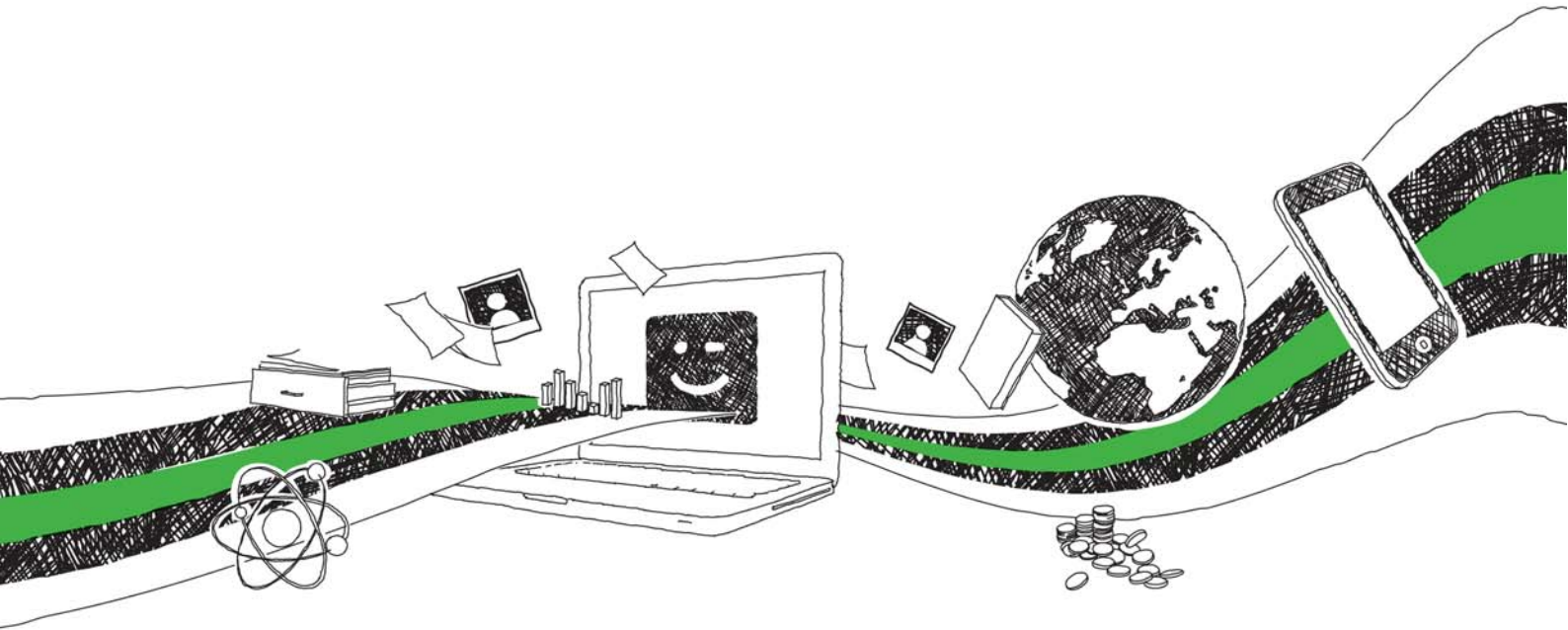
6. **Do you use your commitment for marketing/communication purpose?**

7. **What are the effects in general of your climate action? E.g.**
 - a. How’s the response from your customers?
 - b. Did e.g. the bookings increase? (or go down)

- c. Did the customer satisfaction rise? (or go down)
 - d. Did it affect the staff motivation? (office as well as tour leaders)
 - e. Did you e.g. receive more public/media attention?
 - f. Did you experience any negative effects from your engagement in climate protection measures?
8. **Do you have your local, national or international cooperation partners for climate mitigation measures?**
- a. Which criteria did you use to choose your partner?

9. **Are you in general interested in becoming climate friendlier?**
- a. What are your main motivations for it?
 - b. Which type of climate protection measures would you be most likely to implement?
 - c. Do you know how carbon-offsetting works?
 - d. Are you aware that there are different standards in relation to quality, sustainability and transparency?
 - e. What is your general opinion about carbon-offsetting?
 - f. Would you consider to cooperating with offsetting project provider? Or rather develop an own project to compensate your carbon emissions?
10. **If you liked to develop a project to compensate your greenhouse gas emissions, would you rather consider organizing an own project, cooperating with other tourism operators (private sector) or support a project managed by a tourism organization, environmental NGO or an offsetting agency?**
- a. Where do you see advantages/disadvantages by offsetting the carbon emissions through a partner organization in comparison to running own compensation projects?
 - b. How could you imagine securing the future monitoring of the projects?
11. **Would you prefer funding specific projects with your offsets?**
- a. Which criteria would you use to select a potential project?
12. **If you were offsetting your emissions, would you like to include visiting your climate projects in your itineraries?**

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