

Using social marketing to trigger water saving behaviour in hotels

- a case study of a towel programme in Greece

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Thesis for the fulfilment of the
Master of Science in Environmental Management and Policy
Lund, Sweden, September 2014



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Published in 2014 by IIIIEE, Lund University, P.O. Box 196, S-221 00 LUND, Sweden,
Tel: +46 – 46 222 02 00, Fax: +46 – 46 222 02 10, e-mail: iiiee@iiiee.lu.se.

ISSN 1401-9191

“THE JOURNEY IS THE REWARD.”

“Der Weg ist das Ziel.”

Konfuzius

Acknowledgements

I like to thank Thomas Cook for making this research project in Greece possible. In particular, I would like to thank Swantje Lehnert for her moral and logistical support and for the contacts she provided.

A big thank goes to my supervisor Matthias! Thank you for your endless time, valuable guidance and constructive feedback throughout this thesis process. Without your patience and flexibility, this would have been a much harder journey. Additionally, I would also like to thank Ake and Hakan for their initial help and my external supervisor, Stefan Gössling, for his input at the beginning of this project.

Thank you to Nikos, Mina and Reinhard for your hospitality and giving me the opportunity to conduct field research in your hotels. I extend my thanks to the housekeeping ladies for their help with the data collection. In particular, I like to thank Evi for ensuring that everything said was understood. I also like to thank all the hotel guests, being involved in the interviews, for their generosity in sharing their time and thoughts and for interesting talks. I am grateful that I had the opportunity to go to such a fantastic country! Thanks Vivian for being a lovely host, introducing me to the Greek culture and backing me up throughout my stay. I also extend my gratitude to all the other lovely people I met in Greece who made my stay an unforgettable time.

Thank you to my friends back home and around the world for providing me breaks when needed and for always cheering me up along the way. I extend an extra hug to Caro, Phil and Erik for their help. And finally to my parents: Thank you so much for being always there for me with all your encouragement and support.

Abstract

Water scarcity is one of the environmental issues, which societies face nowadays. The demand for water in popular tourist destinations, in areas that are already subject to limited natural water resources, compounds the problem. Therefore, the objective of the present study was to examine whether social marketing can be an effective method to increase the reuse rates of towels in hotels. The chosen research design is a single case study. To validate the findings, one hotel's towel reuse programme was examined. The case study was based on a triangulation approach and included research methods, such as qualitative interviews and a field experiment. The social marketing theory serves as conceptual framework, with a focus on communication measures, to design, implement, and evaluate the intervention.

The study finds that towel reuse programmes are widely accepted by hotel guests. However, three main barriers are identified in regard to credibility and communication. The first barrier noted is that housekeeping staff do not always follow guest requests in respect to towel reuse. The second concerns the other water-wasting activities. These two factors undermine the credibility of the towel reuse programme. The third barrier is a communication one – i.e. the placement (or lack) of individual signs in the bathroom regarding the programme to communicate the message to guests. Research outcomes suggest that the use of social marketing methods, underpinned by positive feedback (such as recognising individual water consumption) can trigger participation amongst guests. In contrast, statements about social norms and donations or give-aways evoke negative reactions among participants. The study further reveals that the design of signs can be optimized by adding pictures of water and visualisations.

The difficulty of conducting a social marketing approach within the tourism industry, where other activities consume high amounts of water, is discussed. On the basis of this study, it can be said that social marketing is only modestly effective in inducing behaviour change. Remaining knowledge gaps and uncertainties identified herein require further research and validation. In addition, the research has shown that social marketing as method can be too simplistic for such a multifaceted purpose as inducing behaviour change.

Keywords: social marketing, water reduction, towel reuse, sustainable hotel management

Executive Summary

Introduction, relevance and research question

Water scarcity is one of the environmental problems, which societies face nowadays. According to UNESCO, global water consumption has more than tripled in the last decades. The Mediterranean region is one of the areas that is most heavily impacted by water scarcity. The tourist demand in this region, which is often focused on coastal areas and islands, further compounds the problem. Greece is one of the countries with an increasing demand for water driven by tourists, whilst at the same time facing water scarcity due to limited natural resources. Tourism contributes to ten percent of the domestic water use in Greece.

Sustaining nature and natural resources – which are the main assets of the tourism industry in the first place – is critical to tourism companies. Ninety-five percent of tourists' water consumption occurs in the accommodation sector. As studies indicate, laundry is one of the most water-intensive activities in hotels. This is due to the fact that in many hotels, towels and bed linen are changed on a daily basis. It has been shown, though, that improving people's behaviour usually costs considerably less than, for example, technical measures. In the past, there has been much research done on how to encourage individuals to act sustainably. However, many projects haven't been successful. Social marketing has recently been established as one solution to face behaviour change, as the intervention - with the intended outcome to change behaviour - takes a more holistic approach. Social marketing adopts tools from traditional marketing to induce behaviours that lead to societal and environmental welfare.

The present study, therefore, investigates if the environmental impact of water consumption can be partly mitigated through a social-marketing approach. Findings showed that a lot of water can be saved when guests reuse their towels. Additionally, the current reuse rates are relatively low but consumers have shown high willingness to reuse their towels, as revealed in the literature review. Therefore, the objective is to examine if social marketing is an effective method to induce behaviour change. The subsequent research question is:

1. How effective is social marketing in inducing behavioural changes to increase the reuse rates of towels?

To achieve the outlined objectives, the overarching question is broken down into three sub-questions:

- a) What are the hotel guests' perceived barriers and benefits to participating in a towel programme?
- b) Given the identified barriers and benefits for adoption of a towel programme, how should social-marketing efforts be carried out to increase participation rates?
- c) What are the reactions and perceptions of hotel guests to different communication measures?

Research approach

The chosen research design is a single case study. To validate the findings, the examination of the towel programme is based on a triangulation approach with different research methods, such as qualitative interviews and a field experiment. The chosen case was a hotel on the island of Rhodes, Greece. The social marketing theory serves as conceptual framework to guide the research; within the framework, the present study emphasised communication measures such as guests' perception of different message types based on behavioural theories and design of the card. The research approach follows the five stages of the social marketing

process as established by McKenzie-Mohr and shown in table 1. For each stage, different research methods are applied and specific criteria from the social marketing framework are used for the analysis.

Table 1: Overview of applied research methods and criteria for analysis within the given social marketing framework

Stages of social marketing	Research method used for data collection	Criteria used for analysis
1st: Selecting behavior	Literature review	Criteria: <ul style="list-style-type: none"> - Impact of behaviour - Current compliance rate - Probability of engaging people
2nd: Identifying barriers and benefits	Qualitative interviews (exploratory) with hotel employees and guests	Barriers: <ul style="list-style-type: none"> - Internal barriers: linked directly to an individual - External barriers: reside outside an individual
3rd: Developing strategies	Not applicable	Social marketing mix/adapted 4-P framework: <ul style="list-style-type: none"> - Proposition - Cost of involvement - Accessibility for consumers - Social communication
4th: Conducting a pilot	Qualitative interviews (descriptive) with guests about different messages and designs	Three dimensions of knowledge: <ul style="list-style-type: none"> - factual - procedural - effectiveness
4th: Conducting a pilot	Quantitative field experiment in hotel rooms	Statistical measures: <ul style="list-style-type: none"> - mean

Source: Developed by the author based on McKenzie-Mohr, 2011; Peattie & Peattie, 2009; van der Linden, 2014

Literature Review

First a literature review was conducted. The use of secondary data was especially important in order to become familiar with the context of the chosen case. It furthermore provided necessary background information to inform the first stage of the social marketing process, which aimed to determine a potentially successful behaviour pattern.

Exploratory Interviews

The second stage of the social marketing process was an exploratory one, with the objective being to obtain an initial overview of the case and to explore the attitude of guests towards

towel programmes in hotels. The qualitative interviews conducted further reveal perceived barriers and benefits of the programmes. Semi-structured interviews were carried out with housekeeping employees and guests.

Descriptive Interviews

The next step of the research process had a descriptive research purpose, because it sought to obtain feedback about different communication measures from hotel guests. Qualitative interviews were again conducted with guests.

Field Experiment

As a final step, a field experiment was carried out to find out if people change their actual behaviour due to the social-marketing intervention. This research method corresponds with the fourth stage of the social marketing process - conduct a pilot. The experiment was executed with an independent-sample having an experimental group as well as control group.

Results

The study finds that towel reuse programmes are widely accepted by hotel guests, as they are perceived as low-involvement activity. However, three main barriers are identified in regard to credibility and communication. The first barrier noted is that housekeeping staff do not always follow guest requests in respect to towel reuse. The second concerns the other water-wasting activities, which additionally undermine the credibility of the towel reuse programme. The third is a communication barrier – i.e. the placement (or lack) of individual signs in the bathroom regarding the programme to communicate the message to guests.

To overcome the first barrier, it is suggested that housekeeping employees are given training to follow strictly guests' requests. To further improve the credibility of towel programmes, it is essential to reduce other water-wasting activities. With regard to communication, research outcomes suggest that the use of social marketing methods, underpinned by positive feedback (such as recognising individual water consumption) can trigger participation amongst guests. In contrast, statements about social norms and donations or give-aways evoked negative reactions among participants. The study further reveals that the design of signs can be optimized by adding colourful pictures and visualisations. In the case of towel programmes, blue visualisations with water motives were favoured by guests.

The research finds that the application of social marketing in the hotel context is difficult, as there are other activities or offered services, such as the provision of pools, which consume high amounts of water. As a result, social marketing campaigns conducted by a business can be perceived as solely grounded on financial reasons, which undermines the credibility of the towel reuse programme. However, credibility is an important factor for a successful intervention. It is hence recommended to communicate every environmental activity of the hotel to the guests, i.e. the implementation of technical measures, to ensure that guests do not perceive a towel programme as green washing activity.

The research additionally shows that social marketing was only partly effective in inducing behaviour change. The intervention has demonstrated that in the experimental group, where social marketing techniques were applied, towels were reused more than in the control group. On average, the demand for small towels was reduced by four percent and nine percent for large towels. However, one has to be careful with the results, as the sample size did not have statistical validity.

Following the intervention, a value-action gap of 45 percent remained. The analysis undertaken shows that guest behaviour is complex, and that the modest result can be

somewhat explained by various factors like past experiences and the tourism context. Overall, remaining knowledge gaps or uncertainties exist that require further research in order to investigate the still existing value-action gap, and to determine whether there is the potential to increase towel reuse more.

The research has further shown that social marketing as method, although adapted to its purpose of inducing behaviour change, could be too simplistic in its current form for such a multifaceted purpose. It is suggested, that the framework should be more adjusted and adapted. Especially internal barriers to the desired behaviour as well as cost of involvement factors are quite complex. Such aspects - involving behaviour science theories - need to be dealt in more detail within the framework to ensure that the multifaceted factors, which are necessary for changing behaviour, are addressed within the intervention.

In general, the study has shown that social marketing can result in a positive increase in the rate of towel reuse. However, the case study was conducted in a five-star hotel with a specific guest profile (i.e. mostly highly educated, aged 50-60 years, European nationality). It is considered that the study is sensitive to all of these factors, and it is further taking into account that increased education with respect to water conservation amongst housekeeping staff as well as the communication of other water-saving measures could improve the effectiveness of the intervention.

Whilst the 45 percent value-action gap in terms of water consumption still remains, it is unlikely that it can be fully addressed by the use of social marketing. This technique could, however, form part of a comprehensive water-saving approach. The intervention acts directly at the consumer level and thus whilst it cannot replace interventions at a more strategic level, it may contribute to a reduction in water consumption in Mediterranean resorts. The change in water consumption was moderate, but multiplied across other similar hotels and resorts around the Mediterranean Sea, it could be a larger impact in terms of litres saved. Therefore, it can be regarded as one small step towards a more sustainable tourist industry.

Overall, it needs to be noted that behavioural approaches are not sufficient to address environmental problems such as water scarcity. Water management includes different levels of action, such as government regulation, management practices and better technologies. A mix of intervention is necessary towards a more sustainable future.

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1 Introduction

The tourism industry is one of the fastest growing economic sectors in the world. It is, therefore, also one of the main economic drivers and a major source of income for many countries, especially on the Mediterranean Sea (Dubois & Billaud, 2010; Hall, 2014). However, it does not only have positive, but also negative impacts on the environment and is a significant contributor to environmental degradation and climate change, especially with regard to carbon emission and resource depletion such as water usage (Hall, 2014; Tortella & Tirado, 2011; Truong, 2014a).

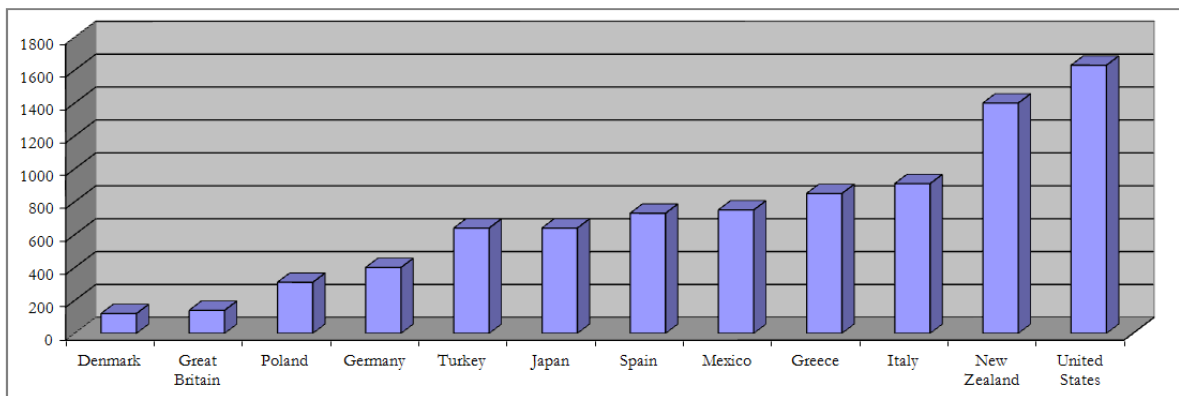
1.1 Background and significance

The next chapter presents the background and nature of the problem addressed in this research and justifies the focus of the study.

1.1.1 Rising water consumption and its impact

Water scarcity is one of the major environmental problems societies face nowadays. The global water consumption has dramatically increased in the last years. According to UNESCO, it has more than tripled in the last decades (UNESCO, 2012). The water consumption per capita is especially huge in high income countries. It varies extremely and can be as high as 120m³ in Denmark and 1630m³ in the United States (US) as figure 1 illustrates. The demand for water is expected to further increase by 25 percent in 2030 due to population growth, rising demand of food, climate change, and increasing industrialisation (United Nations, 2014).

Figure 1: Annual water consumption per capita in selected countries (in cubic meters), 2013



Source: Developed by the author based on Statistic, 2014

According to United Nations (2012), 40 percent of the worldwide population is already affected by water scarcity. Regional conflicts over water use are expected to rise in the future. The Mediterranean region is one of the region's most heavily impacted by water scarcity (Center for Climate Adaptation, 2014). The tourist demand in this region, which is often focused on coastal areas and islands, further reinforces the problem. Due to increasingly higher standards in hotels, growing numbers of tourists and rising water-related tourism

activities, water consumption is predicted to increase steadily within the tourism industry (UNEP & UNWTO, 2008). Ninety-five percent of tourists' water consumption occurs in the accommodation sector (Gössling et al., 2012). Since hotels are the most popular accommodation choice for tourists, they should be given special attention (Tortella & Tirado, 2011).

Greece is one of the countries, which has many international tourist arrivals, but at the same time faces water scarcity. Tourism accounts for ten percent of the domestic water use in country. Therefore, the water consumption at holiday destinations has become a problem. Overall, water consumption in Greece per capita is relatively high as figure 1 demonstrates. As a result, there are impacts on the quantity of water resources. In Greece for example, the surface and groundwater reservoirs are decreasing as the water withdrawal is faster than its replenishment (Center for Climate Adaptation, 2014). These implications can effect the supply of drinking water and it can further lead to the degradation and distribution of ecosystems (Miller & Spoolman, 2012). As a consequence of water scarcity, some Greek Islands even have to import fresh water (Center for Climate Adaptation, 2014).

Sustaining nature and natural resources – which are the main assets of the tourism industry in the first place – is therefore critical to tourism companies. Water management is one big part of it. It is also clearly of interest to the public, as well as to industry, to conserve water (Adriana, 2009; Budeanu, 2005). Companies working in the tourism industry as well as the tourists themselves need to change their current practices. Some of the key players in the industry are tour operators. They have the power to influence both up- and downstream in the tourism supply chain. Hence, they can contribute to sustainable development and environmental protection at holiday destinations. Activities related to resource conservation additionally can be beneficial for hotels, as they reduce their operating costs (Baca-Motes et al., 2013; Barberán et al., 2013). Furthermore, it has been shown that people are increasingly sensitive towards environmental issues and consequently increasingly demand sustainable practices from hotels (Manaktola & Jauhari, 2007; Sloan et al., 2009; Tixier, 2008; Tseng & Kuo, 2013). Therefore, tour operators, often owning hotel chains, as well as hotels themselves have good reasons to minimise their impact.

Water management includes different levels of action, including government regulation, management practices, better technologies, and behavioural changes. In most cases, a mix of intervention is more effective than a single one towards sustainability. Technological measures and innovation, for example, only partially addresses the problem, because the increasing scale of consumption may considerably outweigh the resulting improvements of technical measures. Hence, consumption patterns need to be considered as well (Alan Andreasen, 2002; French, 2013; Johansson et al., 2003). In addition, it has been shown, that changing people's behaviour usually costs considerably less than, for example, technical measures (Alliance for Water-Efficiency, 2010). Therefore, this study investigates how the environmental impact of water consumption can be mitigated by changing behaviour.

1.1.2 Past unsuccessful approaches aimed to change behaviour

In the past, much research has been done to identify how to encourage individuals to act sustainably. However, many projects have not been successful. Studies have shown that cognitive-analytical approaches, based on the assumption that knowledge changes attitudes and attitudes change behaviour, as well as affective-experiential approaches, based on negative messages that induce guilt or punishments, were not very effective in encouraging behavioural changes (Van Linden, 2014; W. P. Schultz, Khazian, & Zaleski, 2008; Peattie &

Peattie, 2009). Numerous studies within behavioural-science research have revealed that it is not enough to solely rely on educational campaigns or economic incentives in order to promote behavioural change. While these information-based campaigns can change attitudes, they do not necessarily lead to behavioural changes, because they neglect other existing barriers (Kaczynski, 2008; Stern, 2011; Krarup & Russell, 2005; Whitmarsh, O'Neill, & Lorenzoni, 2011; Paschke et al., 2002).

People need more than information to change their behaviour. However, until recently most of the campaigns in the field of green consumption were based on behavioural approaches, even though in practice other factors such as social norms and infrastructure improvement have been shown to be more important (Peattie, 2010). In contrast to previous approaches, social marketing takes a more holistic one. For example, it does not only take communication measures into account, but it also focuses on infrastructure improvements among others. Social marketing borrows from different behavioural theories such as sociology, psychology, anthropology and communication theories with the intended outcome to facilitate people's behaviour (Gordon, McDermott, Stead, & Angus, 2006). However, "it differs in the basic set of premises from which its interventions are developed" (Andreasen, 2002, p.6). For example, the communicated message is tailored to the interests and cultural expectations of the target group (Corner & Randall, 2011; Peattie & Peattie, 2009). Thus, social marketing has recently been established as one solution to face behaviour change. It is defined by Dann (2010) as "the adaptation and adoption of commercial marketing activities, institutions and processes as a means to induce behavioural change in a targeted audience on a temporary or permanent basis to achieve a social goal" (Dann, 2010, p.151). The next chapters deal with social marketing in more detail.

1.1.3 The difference between commercial and social marketing

As Peattie & Peattie (2009) have noted, social marketers have learned from the extensive experience and resources from commercial marketing. However, there are some key principles of social marketing that distinguish it from commercial marketing. These differences are outlined in table 2 and described in more detail in the next section.

The organisational output in commercial marketing is a sales campaign trying to sell new products and services. The outcome is focused on profit. In social marketing, on the other hand, the focus and intended outcome is clearly behavioural change (Hall, 2014). While in commercial marketing the target audience is always the consumer, in social marketing it can vary from consumers (downstream) to institutions and organisations (upstream) (Hall, 2014). While competition in commercial marketing means that one competes against other products and services offered to the target audience, in social marketing competition takes place between existing and potential new behaviours (Hall, 2014). While in commercial marketing the exchange is monetary, in social marketing the exchange consists of new behaviours. The 'payoff' within social marketing usually consists of direct and indirect benefits. They are not only of a monetary nature, but can also include pleasure, better health or better status among peer groups (Truong & Hall, 2013).

Table 2: Differences between commercial and social marketing

	Commercial marketing	Social marketing
Purpose	Profit: Sales of products and services	Change of behaviour
Target audience	Consumer	Consumer (downstream), communities, organisations (upstream)
Competition	Compete against other products	Compete against other behaviours
Exchange	Monetary	Usually non-monetary benefits such as psychological ones

Source: Developed by the author based on Hall, 2014; Peattie & Peattie, 2009

1.1.4 Application of social marketing in the business sector

Social marketing cannot be used by non-profit-oriented entities only, but also by businesses. It is important, though, to distinguish between their commercial and social marketing activities. Commercial marketing in a hotel, for example, deals with the promotion of their goods and services that is accommodation and facilities. Social marketing, on the other hand, addresses socially critical individual behaviour (Andreasen, 2002). It uses adapted marketing tools, which have been developed to the specific purpose of behavioural change. In general, change agents are most likely to come from non-governmental organisations (NGOs) or governmental bodies (McKenzie-Mohr, Lee, Schultz, & Kotler, 2011). However, the customised tools of social marketing can also be used by profit-oriented entities to induce, for example, water saving behaviour. Businesses are more likely to conduct social marketing campaigns when they benefit in additional ways from it, i.e. savings in operating costs or increasing their reputation. It has been shown that when companies communicate their social marketing efforts to the public, they can enhance their reputation. Thus, social marketing can be seen as a type of initiatives within an overall corporate social responsibility strategy (Inoue & Kent, 2013) and as such social marketing interventions of businesses can be used for the commercial marketing of their products.

1.1.5 Advantages of social marketing

Social marketing's differences from commercial marketing bring about some distinct advantages. Firstly it is very flexible in its approach and can be utilised by and for different kinds of stakeholders. For example, it can be used for consumers, organisations and media, and it can be used by governmental organisations and private companies. When it comes to the implementation, social marketing is also superior to other methods of inducing behavioural change such as solely educational campaigns. Social marketing does not only focus on attitudes and beliefs, but goes beyond these approaches and emphasis on behavioural maintenance (Corner & Randall, 2011; Peattie & Peattie, 2009). It is the huge

advantage that it is not focusing solely on the delivery of a specific message that show all the benefits of certain behaviour, but social marketing looks behind the communicated message. Thus, people implementing an intervention, do not try to enforce their own points of view, but consider the position of the audience. They tailor the campaigns to the interests and cultural expectations of the target group. As a result, it is easier to involve people and encourage them to engage in desirable behaviour (Peattie & Peattie, 2009). Another advantageous characteristic of social marketing has been shown by Peattie & Peattie (2009); they found that it is flexible in its application and can target different stages of awareness and responsiveness within a group (Peattie & Peattie, 2009). A more thorough discussion of social marketing process' and the criticisms of it will be carried out in the literature analysis section (chapter 2).

1.1.6 Effectiveness of social marketing

The effectiveness of social marketing has been empirically proven in different sectors and fields (Corner & Randall, 2011; Gordon et al., 2006; Truong & Hall, 2013). The most traditional application is in the health sector, where social marketing dramatically reduced the rate of smoking (Kilbourne, 1991; Wolburg, 2006), alcohol consumption and led to a decline in rates of obesity (Truong, 2014a; Shang, Basil, & Wymer, 2010). It has also been shown to protect against skin cancer (Wymer, 2010) and diminished the rates of drug use (Truong, 2014b; Corner & Randall, 2011; Gordon et al., 2006).

In the environment field, social marketing has also triggered behavioural change in the uptake of more sustainable practices, in both the public and private sectors such as in saving water (Baca-Motes et al., 2013) and reducing carbon dioxide (Corner & Randall, 2011). Additionally, community-based social marketing has also increased the prevalence of car sharing, and reduction of water and electricity consumption (McKenzie-Mohr et al., 2011; Paschke, van Gelder, & Siegelbaum, 2002).

Various academics as well as the United Nations World Tourism Organization (2011) see great potential to develop more environmentally friendly consumption behaviours in tourism (Dinan & Sargeant, 2000; Hultman, Haglund, Källgren & Revahl, 2009; Peeters et al., 2009; Scott et al., 2012a, 2012b cited in Truong & Hall, 2013). On the whole, social marketing has been recognised as a potential solution to increase sustainability in tourism and address issues such as resource conservation.

1.2 Problem definition

The next section of this dissertation justifies the focus of the study.

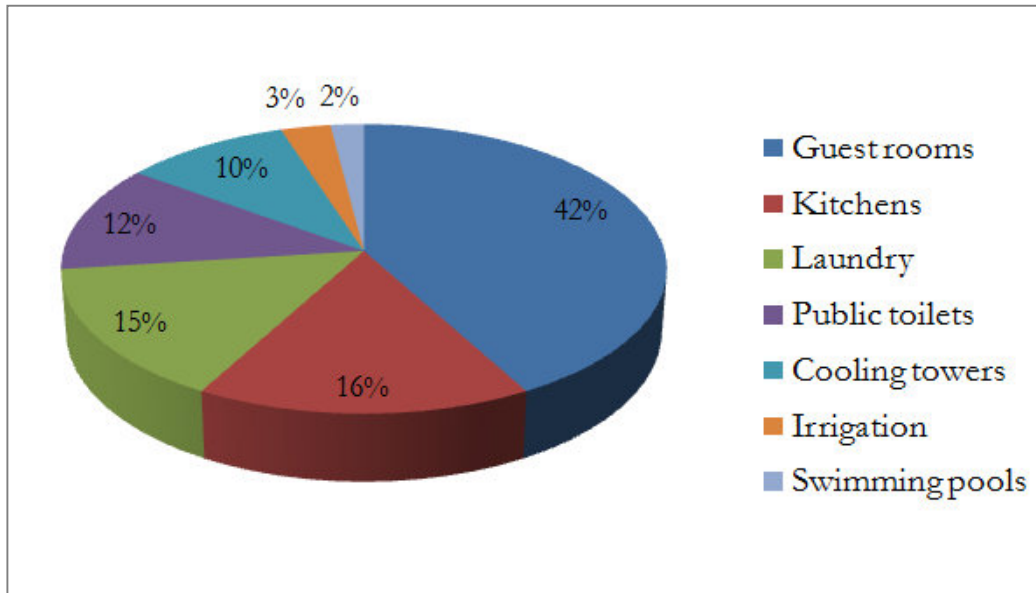
1.2.1 Water usage in hotels

Water is an essential resource for hotels. The water consumption per guest in a hotel can be three times higher than the water consumption in residential settings (Barberán et al., 2013). Numbers vary between 215 litres and 515 litres per guest per day and depend on different factors, such as climate, season, the classification of the hotel, hotel size, numbers of nights, and served meals (Barberán et al., 2013). The water consumption of tourists is, in any event, significantly higher than the water used by local residents. In the Mediterranean, it is estimated that this usage is 1.5-2.5 times higher (Gössling et al., 2012).

1.2.2 Water usage per activity in hotels

The amount of water consumption for each activity varies in hotels. It depends on different factors, such as the hotel classification and geographical region. Figure 2 outlines the results of one such study in Australia.

Figure 2: Water consumption of different activities in hotels



Source: Developed by the author based on Smith et al., 2009

As this graph shows, the highest usage takes place in guest rooms (42%), followed by the kitchen (16%) and laundry (15%). Other studies in hotels in Turkey and the United States have shown similar results, where laundry makes up 17 percent and 15 percent of the water usage (Antakyah, Krampe, & Steinmetz, 2008; Cooley et al., 2007). Overall, hotels that have laundry facilities have significantly higher water consumption than hotels without, which indicates that laundry constitutes a large portion of hotels' overall water usage (Deng & Burnett, 2002).

As shown above, laundry is one of the most water-consuming activities in hotels. This is due to the fact that in many hotels, towels and bed linen are changed on a daily basis. It has been shown that improving people's behaviour costs considerably less than, for example, technical measures (Alliance for Water-Efficiency, 2010). One of these measures, which focus on guests' behaviour, are towel programmes. Such towel programmes have already been implemented by some hotels, and include, for example, posting signs in the hotel rooms asking guests to reuse their towels in order to help to protect the environment. In such programmes, the message to guests is that only towels that are on the floor will be changed. In 2001 it is estimated that an implemented towel programme can yield 6.50 US dollars per occupied room per night (Baca-Motes et al., 2013).

1.2.3 Current performance of towel programmes in hotels

Although awareness and concern about environmental problems is rising among the public, and even though people are willing to protect the environment, the participation rates in

towel programmes are relatively low. Numbers vary, from three percent to a maximum of twelve percent (Tixier, 2008). In some cases, participation rates as high as 30 percent have been achieved (Kuoni, 2013). Yet, other studies have revealed a compliance rate between 30 – 38 percent (Cialdini 2005; Goldstein, Griskevicius, and Cialdini 2007; Goldstein et al. 2008; Baca-Motes, 2013). Altogether, these rates are relatively low, and it can be surmised that there is lots of room for improvement. As Paschke et al. (2002) demonstrated, the leisure-tourism industry is particularly lagging behind, because towel programmes tend to be more successful with business travellers. Some hotels, which are popular with leisure-tourists, do not even have a towel programme implemented even though the potential benefits of these programmes for the environment as well as hotels are very high.

1.3 Research objectives

This study, therefore, investigates whether the environmental impact of water consumption can be partly mitigated through a social-marketing approach. As shown in the previous section, social marketing has proven highly effective in many different areas. However, very little empirical research has been conducted within the tourism with many studies being conceptual rather than academic. This study has, therefore, the following overarching research objectives:

1. To examine whether social marketing can be an effective method to increase the reuse rates of towels in hotels.

In order to address the existing knowledge gap, a social-marketing intervention is being used to investigate how towel programmes within hotels can be improved. Therefore, the subordinated research objectives are as follow:

2. To identify perceived barriers and benefits to the guests, in terms of participating in a towel programme.
3. To develop a strategy that removes these identified barriers while simultaneously supporting the reuse of towels.
4. To develop a sound knowledge of hotel guests' reactions and perceptions of different messages and images.
5. To test the effectiveness of the social-marketing intervention in a pilot project.

1.4 Research questions

The overarching research question is the following:

1. How effective is social marketing in inducing behavioural changes to increase the reuse rates of towels?

Therefore, the subordinated research questions are as follow:

- a) What are the hotel guests' perceived barriers and benefits to participating in a towel programme?
- b) Given the identified barriers and benefits for adoption of a towel programme, how should social- marketing efforts be carried out to increase participation rates?
- c) What are the reactions and perceptions of hotel guests to different communication measures?

1.5 Disposition

The dissertation is divided into eight chapters.

In Chapter two, a thorough analysis of the immediate field of study is presented and the main gaps in the research field are outlined. Current findings of social marketing in tourism, as well as social marketing used to foster sustainable behaviour, are presented. It further introduces the process of social marketing as a theoretical concept, followed by a detailed and critical discussion.

The different steps of the social marketing process are used as background for the research approach, which is explained in chapter three. As is common with social marketing, the methodology is heavily based on behavioural theories. The section further identifies research limitations and describes the target audience.

Chapter four presents the main findings of the different steps of the social marketing process within the chosen conceptual framework. Step one is based on the literature review, while steps two to four are based on interviews and the experiment.

Chapter five discusses the effectiveness of the social marketing intervention while chapter six compares and contrasts the findings with previous studies.

Chapter seven considers the limitations of the research and whether or to what extent findings can be generalised. It also reflects on the chosen methodology and framework, and provides suggestions for further research.

Chapter seven summarises the main findings, gives recommendations, and highlights main research contributions.

2 Literature analysis

The following literature analysis covers the theoretical background that is relevant to social marketing in tourism. It follows a thematic approach and starts with current findings of social marketing in hotels. The literature analysis gives, in addition, an overview of social marketing's development and describes the process in more detail. Insights into different communication measures that trigger sustainable activities as well as potential factors that can engage in water-saving behaviour are summarised. Finally, the different contexts of holiday versus home is discussed and the identified research gap is presented.

2.1 Present findings of studies related to towel programmes in hotels

In 2008, Goldstein et al. conducted a study among hotel guests in the US in order to evaluate the influence of social norms on water-saving practices. They carried out two field experiments, where they manipulated the signs that requested that guests reuse their towels in order to protect the environment. They found that interventions with descriptive norms (e.g., "the majority of guests reuse their towels") were far more successful in triggering towel reuse than the conventional approach that only focused on environmental protection. Additionally, linking the behaviour to a specific, close reference group (e.g., "the majority of guests in this room reuse their towels"), further increased compliance rates from 35.1 to 44.1 percent (Goldstein et al., 2008). Their intervention is not directly linked to the social marketing approach, but the study uses sub-techniques of the social marketing mix, namely social communication. Although the reliability of the study could be questioned on the grounds that a field experiment has too many external variables, evidence from other studies confirmed the findings (Goldstein, Griskevicius, & Cialdini, 2007; Schultz, Khazian, & Zaleski, 2008; Shang et al., 2010). Shang et al. (2010) measured behavioural intentions and attributions of different messages being used in towel programmes. They conducted a controlled experiment. The outcome revealed that social norms not only increase the compliance rate of a towel programme, but they also have an impact on the hotel's reputation. In general, guests associate more negative values with the hotel in regard to towel programmes when social norms were present. When the signs use social norms, though, the potential costs savings are less important to the guests. Consequently, more positive values are attributed to the hotel.

Goldstein et al. (2007) further discovered that the compliance rate increases when the hotel stated that they already had made a donation to a charity. This result matches with the theory of reciprocity. Shang et al. (2010) also partly support these claims. Their study found that attitudes toward a hotel were more positive when the hotel stated that the savings were donated to some kind of charity.

Moreover, the study by Shang et al. (2010) revealed that the hotels should include their own logos on the cards. This is perceived to be more credible by the guests than a logo of an environmental organisation and in turn can lead to better compliance rates (cf. Paschke, van Gelder, & Siegelbaum, 2002; Stern, 2011).

Evidence from another large-scale field experiment by Baca-Motes et al. (2013) suggested that when guests made a brief commitment statement at the beginning of their stay at the check-in, the compliance rate of the towel programme increases as well (from 24.4 percent to 31 percent). This was further strengthened when guests received a symbol of their

commitment in form of a lapel pin (Baca-Motes et al., 2013). Under this condition, the reuse rate increased from 24.4 percent up to 41 percent.

Overall, it can be said that social norms, visualised commitment, and making donations to a charity are factors that encourage participation in towel programmes. However, all of the practices led among guests to different perceptions of the hotel and associations with it.

2.2 Definition of social marketing and its development

To date, there is no single widely accepted definition of social marketing. The term was first formalized by Kotler & Zaltmann in 1971. They argued that if a social campaign uses elements of a traditional product campaign, it was more likely to be successful. Kotler & Zaltmann recognised that social marketing is based on behaviour theories as well as other social science. Hence, they argue that social marketing is a useful framework for effective social planning. Their definition is still one of the most-cited ones nowadays. They defined social marketing as:

“The design, implementation, and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution, and marketing research. Thus, it is the explicit use of marketing skills to help translate present social action efforts into more effectively designed and communicated programs that elicit desired audience response.” (Kotler & Zaltman, 1971, p12; underlined not in original)

This definition reflects the early perception of social marketing. Social marketing was simply seen as a marketing tool used by non-profit organisation to address various social issues (Kestane, 2014). However, the concept of social marketing changed. A more recent and also widely cited definition of social marketing comes from Andreasen. Andreasen (2002) criticised the definition by Kotler & Zaltmann for being imprecise, because within their definition the aim of social marketing is the *acceptability* of social ideas. Andreasen advocates that “simply gaining acceptance of an idea without inducing action is not success. Indeed, this [Kotlers and Zaltmann’s] approach is more appropriately labelled ‘education’ or ‘attitude change’” (Andreasen, 2002, p.7). Kotlers and Zaltmann’s approach is, therefore, similar to the cognitive-analytical approaches, which have not been successful. In contrast, Andreasen emphasises on the outcome of behavioural change and defines social marketing as follow:

“Social marketing is the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of society.” (Andreasen, 1995, p. 7; underlined not in original)

Andreasen’s definition still heavily relies on traditional marketing principles. However, some authors have argued that the whole idea of directly transfer tools one by one from marketing is not appropriate. They argue that these tools do not fit the purpose of social marketing being behaviour change instead of profit maximisation (Peattie & Peattie, 2009; Gordon, 2012). Dann (2010), therefore, advocated a new definition emphasising on the necessary adaption of the tools. Dann (2010) defines social marketing as:

“The adaptation and adoption of commercial marketing activities, institutions and processes as a means to induce behavioral change in a targeted audience on a temporary or permanent basis to achieve a social goal.” (Dann, 2010, p.151; underlined not in original)

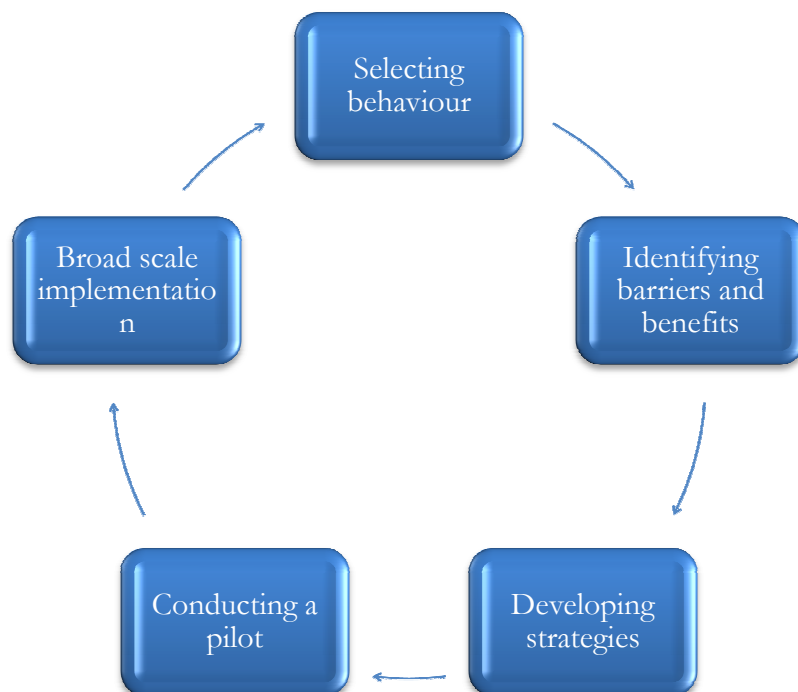
Due to this development, nowadays social marketing tools are much more adapted to its specific purpose than in the past. The social marketing process is described in more detail in the next chapter.

2.3 Theoretical framework: the social marketing process

The following section describes the theoretical approaches of the social-marketing process. In reality, elements of the social marketing process are conflated or left out, depending on the purpose and scope of the intervention. Hence, the following described process is an idealised one.

Alternative definitions provide different break-downs of the process steps. However, these definitions have also many common elements. Table 3 outlines differing interpretations of the social-marketing process that have been identified by various authors. Some of the defined processes were ‘renewed’ during the last decades, due to new insights in the field. For the purpose of this paper, the *division* into five stages by McKenzie-Mohr (2011) has been applied as it is the most recent one. Other social marketing frameworks from the past relied to a great deal on traditional marketing without much adoption. The process is outlined in figure 3. The *content* of the different stages described in the next section combines elements of other authors such as Kotler & Lee (2012), Peattie & Peattie (2009), Andreasen (2002) and Hall (2014). Their theories are often used as the theoretical background for social-marketing studies as the authors are among the most well-known and widely quoted experts in the field.

Figure 3: Different stages of the social marketing process



Source: Developed by the author based on McKenzie-Mohr, 2011

Table 3: Stages of the social marketing process as identified by various authors

Author	Date published	Name of framework	Stages
Kotler & Zaltman	1971	Cycles of social marketing	<ol style="list-style-type: none"> 1. Information gathering 2. Planning 3. Product development 4. Measuring 5. Reprogramming
Andreasen	1995	Strategic marketing stages	<ol style="list-style-type: none"> 1. Listening 2. Planning 3. Structuring 4. Pre-testing 5. Implementation 6. Monitoring
Kassirer and McKenzie-Mohr	1998	Tools of change	<ol style="list-style-type: none"> 1. Setting objectives 2. Developing partners 3. Getting informed 4. Targeting the audience 5. Choosing tools of change 6. Financing the programme 7. Measuring achievements
Andreasen	2006	The social marketing process	<ol style="list-style-type: none"> 1. Listening 2. Planning 3. Pre-testing 4. Implementing 5. Monitoring 6. Revising (Loop back to step 1 or 2)
National Social Marketing Centre	2006	Total process planning model	<ol style="list-style-type: none"> 1. Scope 2. Develop 3. Implement 4. Evaluate 5. Follow-up
McKenzie-Mohr	2011	Community-based social marketing	<ol style="list-style-type: none"> 1. Selecting behaviours 2. Identifying barriers and benefits 3. Developing strategies 4. Conducting a pilot 5. Broad scale implementation
Hall	2014	Process of social marketing	<ol style="list-style-type: none"> 1. Define problem 2. Conduct marketing research 3. Segment and target market 4. Design appropriate marketing strategy 5. Implement and monitor intervention programme 6. Evaluate the programme

Source: Developed by the author based on Hall, 2014, p.74/78

2.3.1 Stage 1: Selecting behaviour

The first stage of the process is called 'Selecting behaviour'. It includes different sub elements such as defining the problem and selecting behaviour and target group. As implied in the title of this stage, a particular behaviour should be addressed and not a general attitude or belief (Peattie & Peattie, 2009). So, the kind of problem that a certain sector or region is facing (i.e. water scarcity) needs first to be assessed. Secondly, it needs to be decided which behaviour within this sector needs to be targeted (i.e. promote installation of low-flow showerheads or shorter showers). Thorough market research is necessary at this stage.

In order to determine a potentially successful behaviour pattern, the researcher needs to look at three criteria. The first one determines the impact of the behaviour. This criterion is supposed to be as high as possible. The second criterion looks into the current compliance rate (level of penetration). The rate should be low, which indicates that a high potential exists. The last criterion determines the probability of engaging people in the new behaviour. This factor should also be high (McKenzie-Mohr, 2011).

Once the behaviour is selected, one can identify the relevant target group (i.e. hotel manager or guests) (Hall, 2014). This is very important - as Andreasen (1997) stated as "all good social marketing starts and ends with the target customer" (Andreasen, 1997, p.294). Through a specific target audience, it is possible to tailor the strategy to the needs of this distinct group. Consequently, one should expect more effective results (Hall, 2014). As a last step of this stage, a specific objective needs to be set. This objective should be measurable and actionable and guides the whole implementation process (Hall, 2014).

2.3.2 Stage 2: Identifying barriers and benefits

In stage two, the aim is to understand the target audiences' attitudes, needs, and current behaviour. This market research enables the researcher to identify associated barriers and benefits to the selected behaviour as well as competing behaviours. Competing behaviour is defined as the one currently carried out by individuals (Hall, 2014).

Barriers can be internal or external. Internal barriers are linked directly to an individual. They could be, for example, a lack of knowledge with regard to what can be done in order to act sustainably or it could also be an absence of motivation (McKenzie-Mohr, 2011). External barriers reside outside the individual. For example, people's access to the desired behaviour might be hindered by a lack of infrastructure or monetary issues. The goal is to make the behaviour as convenient and affordable as possible (McKenzie-Mohr, 2000; McKenzie-Mohr, 2011). Several factors are identified within the literature, which facilitate or hinder sustainable behaviour. Some of the well-established ones are habits and routines (Barr et al., 2010; Paschke et al., 2002), perceived reliability and credibility (Inoue & Kent, 2013; Paschke et al., 2002; Shang et al., 2010), low or respectively high involvement activities (Stoll-Kleemann et al., 2001), experiences and expectations (Peattie, 2010) as well as moral and normative concerns. Barriers and benefits vary greatly between individuals and are context-specific. Therefore, a thorough discussion of these factors is beyond the scope of this study. The specific barriers and benefits for the towel programmes in the hotel under study will be explored and discussed in later chapters.

Several studies have revealed that each kind of environment-friendly behaviour has its own barriers and benefits (Oskamp et al., 1991; McKenzie-Mohr, Nemiroff, Beers, & Desmarais, 1995; Tracy & Oskamp, 1984 all cited in McKenzie-Mohr, 2011). It is necessary to gain

specific information in order to develop a focused strategy that removes those elements that the target audience perceives as barriers. This makes it more likely that people adapt sustainable patterns of behaviour (Hall, 2014; Lee & Kotler, 2011; Peattie & Peattie, 2009). The identification of potential barriers is very important, as a failure to do so will result in an intervention that has only limited impact, or none at all (Hall, 2014; Mckenzie-Mohr, 2000; McKenzie-Mohr, 2011).

2.3.3 Stage 3: Developing strategies

In the third stage of the social-marketing process an intervention strategy, which must match the target group, is developed. This strategy should systematically remove the perceived barriers, and it should cause the associated benefits of the selected behaviour. Furthermore, the competing behaviour has to be identified. The perceived cost of this competing behaviour can be highlighted to the target audience during the intervention. Researchers look for attractive exchanges that trigger behaviour change from the current behaviour to the desired one. This step corresponds with the positioning strategy in the conventional marketing process (Hall, 2014).

Selected behaviour-change tools as well as psychological knowledge, fitting to the identified barriers are used for this stage (Lee & Kotler, 2011; Mckenzie-Mohr, 2000; McKenzie-Mohr, 2011). The traditional tool is the 4P-framework utilised in commercial marketing. This tool is also called the marketing mix, and comprises product, price, place, and promotion. Until recently, the marketing mix tool used in social marketing heavily relied on the traditional marketing mix (Gordon, 2012). However, as mentioned above some authors have argued that the whole idea of taking tools one by one from commercial marketing is not appropriate, as the tools do not fit the purpose of social marketing. Peattie & Peattie (2009) raised questions as to how effectively marketing tools can be used for such a different purpose. In their opinion, a tool “will perform the task that it is designed to do most effectively” (Peattie & Peattie, 2009). As a result, they introduced a marketing mix that is adapted to the social context (Peattie & Peattie, 2009). The former approach is more product-oriented while the adopted marketing mix is focused on the consumers. The traditional marketing mix has been criticised for being too simplistic and static for new purposes. In addition, the biggest criticism is that the traditional 4P-framework has an internal orientation that focuses on the seller, rather the consumer (Gordon, 2012). However, through adaption and specification of the traditional marketing mix to social marketing’s purposes, this drawback is overcome by utilising a strong consumer perspective. Table 4 illustrates the customised social-marketing mix by Peattie & Peattie (2009).

Table 4: Comparison of traditional and adopted marketing mix

Traditional 4P	Social marketing mix by Peattie & Peattie (2009)
Product	Proposition
Price	Cost of involvement
Place	Accessibility for the consumer
Promotion	Social communication

Source: Developed by the author based on Peattie & Peattie, 2009

Social marketing mix

According to Peattie & Peattie (2009) a 'behavioural proposition' is promoted instead of an actual product.

Instead of price, Peattie & Peattie (2009), propose 'cost of involvement', because the cost of changing certain behaviour patterns is mainly non-monetary. However, "costs may be in terms of time and effort, overcoming psychological barriers, or even a physical addiction" (Peattie & Peattie, 2009, p.264). Hence, the cost of involvement is much more than solely the economic value; it represents the barriers that the participants face. Overall, the cost of involvement is similar to the transaction-cost theory of economics (Gordon, 2012; Peattie & Peattie, 2009).

Instead of place, Peattie & Peattie use 'accessibility'. The idea is that social marketing is not based on tangible products, but on behaviour. Thus, the key issue for the marketers is to overcome external barriers that exist to the desired behaviour. Only when this behaviour is easily accessible, can the intervention strategy be effective (Peattie & Peattie, 2009). Therefore, provision of infrastructure plays an important role in this category (Whitmarsh, O'Neill, & Lorenzoni, 2011).

Instead of promotion, Peattie & Peattie (2009) propose 'communication'. According to the authors promotion is characterised by a one-way distribution of information. Communication, on the other hand, is more comparable to a two-way interaction that includes relationship building. The goal of communication is "to encourage the acceptance, adoption and maintenance of a particular social proposition or behaviour" (Peattie & Peattie, 2009, p.264). There are certain criteria, which are necessary to be addressed to make communication efforts effectively. In general, messages need to be specific, short, and simple so that they can easily be remembered (Manning, 2009; McKenzie-Mohr, 2011). For environmental communication, it is especially important to formulate the message in a positive way and not to use threats (Luca & Suggs, 2010; van der Linden, 2014). Moreover, the information source must be credible (McKenzie-Mohr, 2011; Paschke et al., 2002; Shang et al., 2010). Numerous studies have further shown that it is important to use prompts in order to remind people to carry out activities. These must be placed in noticeable locations, at the point of action where guests can see it on a regular basis (Lee & Kotler, 2011; Manning, 2009; Paschke et al., 2002).

2.3.4 Stage 4: Conducting a pilot

When it comes to communication, Luca & Suggs (2010) encourage pretesting the message before the intervention is initiated. The pretesting can provide valuable insights into the target groups' understanding and reaction to the message, as indicated by many studies (Gallivan et al. 2007; Gruchy & Coppel, 2008; Johnson et al., 2007; Young et al., 2004).

Before the intervention is broadly implemented, it should be piloted with a small number from people in the target audience. This step ensures that the chosen strategy motivates the audience to perform the desired activity (McKenzie-Mohr, 2000; Peattie & Peattie, 2009). The piloting can be done in two different ways. In one approach, the baseline numbers are collected beforehand, then the strategies are implemented and follow-up numbers are gathered. However, those numbers are problematic, since external influences (i.e. the weather) might impact the results. Thus, according to Mc-Kenzie-Mohr, it is better to monitor two groups at the same time: one control group and one experiment group. Again, it is important to measure the actual behaviour change and not the attitude or awareness of the

participants (McKenzie-Mohr, 2011). If the piloting study is not successful, the programme needs to be altered and adjusted until the desired level of behaviour change is achieved (McKenzie-Mohr, 2000).

2.3.5 Stage 5: Broad scale implementation

In the last stage, the intervention is broadly implemented. This stage includes three different elements, namely monitoring the behaviour, evaluating the effectiveness, and re-defining the programme. It is a systematic, ongoing process, which starts with obtaining information on the baseline compliance rate. After the intervention has taken place, the direct impact needs to be tracked and measured at several points in time. The effectiveness of the programme can then be determined through an evaluation of numbers. The results can be measured against set objectives and, if necessary, the intervention can be adjusted. This step is necessary on a broad scale since the piloting might not have been representative. Furthermore, conditions might have changed so an adjustment might be also necessary (Hall, 2014; Lee & Kotler, 2011; Peattie & Peattie, 2009).

2.4 Criticism of social marketing

The concept of social marketing is highly contentious. Some authors question the effectiveness of social marketing for various reasons. Some have argued that there are no long-term studies on behavioural change. Thus, they state it has not been proven that the desired behaviour was retained (Hall, 2014). This argument is supported by the fact that the modern public has a short attention span and that topics remain just a brief time in people's consciousness (Downs, 1972). Furthermore, some have declared that the marketing mix, an underlying tool of social marketing, is focused on the short term (transaction and sales) instead of long-term goals, such as relational thinking and brand equity. These long-term achievements are especially important for social marketing in terms of behavioural change and its maintenance (Rafiq & Ahmed, 1995; Evans and Hastings, 2008).

Additionally, many experts have argued that currently there are not many applied cases of social marketing. Most of the studies have been conceptual in nature and not actually carried out. A further problem is that the studies are often not theoretically informed and do not connect theory and practical study in a meaningful way (Hall, 2014). In contrast, some experts state that some studies use elements of social marketing, but do not explicitly refer to the concept (Luca and Suggs, 2013; Truong & Hall, 2013).

Thirdly, some authors argue that an assessment of social marketing's effectiveness is very difficult. Thus, studies claiming that social marketing is effective must be viewed with caution. In particular since various methodologies are used in the different studies. Thus, they are not comparable (Munro, Lewin, Swart, & Volmink, 2007). However, that lies in the nature of social marketing, since the tools must be adapted to the specific purpose and target audience of the intervention.

Still other academics propose “that social marketing alone is insufficient to build support for the more ambitious policy changes and interventions that constitute a proportional response to climate change” (Corner & Randall, 2011, p.1010). According to this argument the social marketing process is not radical enough since it ‘simply’ addresses pro-environmental behaviour. In order to respond effectively to climate change, the public needs to get involved

at deeper levels that lie beyond social marketing's capacity. Social marketing brings only marginal improvements, according to these advocates. As Thøgersen & Crompton (2009, p.6): "the cumulative impact of large numbers of individuals making marginal improvements in their environmental impact will be a marginal collective improvement in environmental impact". Yet, Corner & Randall (2011) acknowledge the important role of social marketing in encouraging public engagement in slowing down climate change. In their opinion, social marketing can be valuable to ensure that behavioural interventions are well designed and effective.

Some authors go even further and state that "society should aim to fix the structures and processes upstream that help create problems in the first place; in some cases these will be the socio-technical structures and institutions [...], and is clearly concerned with much more than the behaviours of individuals but deals with system change" (Andreasen, 2006, p.239) . This is supported by Quigley & Watts (2005), who propose that the wider context must be acknowledged. Thus, it is necessary, for example, to focus on commercial marketing that creates unsustainable consumption patterns. This is indispensable as otherwise people get constantly manipulated by negative influences that strengthen unsustainable behaviour (Wymer, 2010). Some authors also argue that social marketing can be applied upstream. Social marketing can therefore address institutions, companies, and organisations as well. These kinds of social-marketing campaigns can try to induce such institutions to address this wider societal problem (Hall, 2014).

Peattie & Peattie (2009) also argue that, so far, social marketing has addressed behaviour with incremental environmental benefits, instead of addressing the dominant consumer-lifestyle paradigm. They doubt, however, that this will change in the future, since governments seek growth. The promotion of sustainable consumption patterns is mainly an altruistic one, while other areas of social marketing – such as the health sector – address topics of self-interest to the public, because the outcome can reduce their expenses. According to Peattie & Peattie (2009), reducing the consumption level would simultaneously decrease tax revenue and the gross domestic product (GDP). Therefore, they argue that social-marketing campaigns might not gain institutional support unless other policy measures are developed. Yet, they also propose that social marketing can be used to change this social paradigm, because of its flexible nature. Thus, it could be used to increase the acceptance of consumption strategies among policy makers and other key stakeholders (Peattie & Peattie, 2009).

2.5 Present findings of people's behaviour within a specifically holiday context

When people are on holiday, they are in a different situation and in a different frame of mind. Thus, behaviour in tourist sectors has to be evaluated with caution, as the behaviour of tourists is highly context specific.

As Tixier (2008) already mentioned, "a favourable attitude in one's local and personal sphere towards sustainability does not necessarily mean a sustainable behaviour, especially when going abroad into a completely different setting." Other studies confirm this finding by stating that tourists do not consider sustainability issues during the holiday decision-making process (Barr, Gilg, & Shaw, 2011; Becken, 2007; Dickinson et al., 2010). This is even the case when consumers are aware of the environmental impact of their actions and when people practice sustainable consumption at home (Tixier, 2008). The environmentally

friendly practices of people are often not transferred into a tourism context, for a number of different reasons. The European Centre for Ecological and Agricultural Tourism revealed that holidays are associated with “individual freedom in an intact world” where “the guests would like to forget personal and collective problems and their own limitations” (Tixier, 2008, p.10). Therefore, holidays are perceived as outside of concerns surrounding sustainability (Barr et al., 2010; Dickinson et al., 2010). Psychological and social reasons also play a role in this decision process. People often place higher value on the primary purpose of their travel (i.e. family obligations, gaining social prestige, and leisure consumption) than on environmental protection (Gössling et al., unpublished). Overall, tourism holds different meanings for consumption than other consuming activities do. This makes it more complicated to transfer the sustainable activities at home to sustainable activities during holidays (Barr et al., 2011). Due to the special value attached to holidays, Dickinson (2010) suggests that an awareness-attitude gap exists. People are aware of the environmental impact, but they do not transfer that knowledge to a deeper concern for the environment (Dickinson, 2010).

The transformation is especially problematic for low-cost flights, which have a significant impact on the environment. Studies by Dickinson et al. (2010) and Barr et al. (2010) found that there is little evidence that people change their behaviour in regard to flying. This is also the case when they are aware that flying contributes to global warming. There are different reasons for this behaviour. Some consumers justify their behaviour on the grounds that they usually engage in sustainable practices at home (Dickinson et al., 2010). Furthermore, people would rather pay additional taxes than reduce their flying consumption (Barr et al., 2010). Other barriers include the provision of infrastructure. For example, slow travel alternatives for flying are not easy accessible or readily available (Dickinson, 2010). Therefore, it is easier to keep flying. Moreover, a minority of people believe that the contribution to climate change from flights is negligible or non-existent (Barr et al., 2010; Dickinson, 2010). The studies have also revealed that some people pass the responsibility on to other stakeholders, i.e. politicians and other institutional stakeholders (Tixier, 2008). Additionally, it is suggested that new and innovative ways of making flying more sustainable need to be invented (Barr et al., 2010; Dickinson et al., 2010).

There is also evidence, though, that suggests that other factors do trigger sustainable behaviour during holidays. First, certain behaviours are habitual in nature and thus are transferred to tourism activities as well (i.e. energy and water savings). Other studies have shown that tourists will behave in a sustainable way at their travel destination when they feel strongly that they would like to conserve the particular natural setting (Barr et al., 2010; Tixier, 2008).

The fact that different studies have arrived at different results stems, in part, from the different scales that have been used. The results are therefore not necessarily inconsistent, but are instead due to the different scope (flying versus nature conservation) and methodology (interviews versus focus groups) used in the studies.

2.6 Research gap: academic social marketing studies in tourism

On the whole, social marketing has been recognised as a potential solution to increase sustainability in tourism and address issues such as resource conservation. However, applied social marketing interventions within the business sector (in comparison to the public sector) are less common and, thus, few studies exist (Shang et al. 2010, Shang, 2007; Goldstein et al.

2008). This might be due to many businesses' primary interest in marketing their own products instead of focusing on societal issues.

So far, in the tourism field, the conducted studies with regard to social marketing are mostly conceptual, more practical than academic, and concentrated in the UK as well as the USA (Truong, 2014a). As they lack cultural diversity and as research has shown that behaviour of tourists is highly context specific, especially with regard to environmental sustainability (Barr et al., 2011, 2010; Dickinson, 2010; Tixier, 2008), the question arises whether social marketing is an effective method to trigger behavioural change in the tourism sector. This research aims to address the existing knowledge gap.

3 Research approach

This chapter describes the applied research approach. The aim of the study is to investigate if social marketing is an effective method in triggering behaviour change. The social marketing theory, as described in chapter 2.3, serves as conceptual framework to guide the research. The research logic of the present study is a deductive one, because an already existing theoretical structure (social marketing) is applied (cf. Collis & Hussey, 2009). Within the framework, the present study emphasised on communication measures. The focus was chosen due to different reasons. Firstly, technical measures were explored by an external consultant the year before in the hotel of the study. Secondly, consumer responses to interventions depend to a large extent on the way the programme was communicated and promoted as studies have shown (Goldstein et al., 2008; Johnson et al., 2007; Young et al., 2004). The “the impact of communications upon behaviour can vary dramatically based upon how the communications are developed” (McKenzie-Mohr, 2011, p.16). Thirdly, the core of social marketing, which also distinguish it from other behavioural change approaches, is to tailor the communication measures to the target audience. Therefore, it is especially important to gain feedback from this group. Lastly, messages influence guests’ perception of the hotel as study has revealed (Shang et al., 2010). It is hence especially important that the communicated message is not perceived negatively, as the hotel wants to safeguard guests’ satisfaction. This warrants repeat guests visitation, which is essential for the viability of the hotel.

The research approach follows the five stages of the social marketing process as outlined in figure 3. For every stage of the process, different research methods are applied and specific criteria from the social marketing framework are used for the analysis. The applied research methods and analysis criteria are described in more detail in the following chapters.

According to Bryman (2008, p.31), a *research design* “provides a framework for the collection and analysis of data”. Examples include a cross-sectional design a longitudinal design or a case study design (Bryman, 2008). In contrast, a *research method* is “simply a technique for collecting data” and “can involve a specific instrument, such as a self-completion questionnaire” (Bryman, 2008, p.31). The next chapter describes the research design, while chapter 3.2 (“Research methods”) explains the theoretical background and aim of the various techniques used in the present study. Moreover, in the corresponding sub-chapters of the research method, the specific applications of these techniques and the data-collection process in regard to the present study are described.

3.1 Research design

The chosen research design is a single case study. Case studies are “used to explore a single phenomenon in a natural setting using a variety of methods to obtain in-depth knowledge” (Collis & Hussey, 2009, p.82). Therefore, a case study approach is appropriate for a social marketing intervention, which is also highly context specific. The research investigates the effectiveness of social marketing on a reduction in water consumption in a hotel.

3.1.1 Description of the case

The chosen case was a hotel on the island of Rhodes, Greece. This island in the Mediterranean Sea was chosen because it lies in a region with water shortage, and is one of

the most important tourist regions in the world (World Wide Fund, 2004). The hotel was selected due to the opportunity to collaborate with one of the largest tour operators in Europe.

Hotel and guest profile

The chosen case study is a five star hotel located on Rhodes; Greece where the climate is very hot and dry during the tourist season in summer. The hotel belongs to the SENTIDO brand, which is a franchise concept owned by Thomas Cook and has overall 154 rooms. It is situated next to the beach and has additionally its own pools. The guests in the hotel come mostly from Germany, but they are also from other countries in Europe such as Great Britain, Belgium, Austria, France and Russia. The majority of the guests are over the age of 50. Almost all stay there for leisure reasons and travelled mostly in couples. Some families with children and small travel groups are an exception. The interviews indicated that most of the guests are highly educated (i.e. university education). Further, it is assumed that people staying at a five star hotel have a good income.

3.2 Research methods

To validate the findings, the examination of the towel programme is based on a triangulation approach with different research methods to investigate the phenomena. These are described in the following chapters in more detail.

3.2.1 Literature review

First a literature review was conducted to provide background information on social marketing and water consumption, in order to scope down the research focus. The use of secondary data was especially important in order to provide context to the research area. It furthermore provided essential background information for the first stage of the social marketing process, which aims to determine potentially successful behavioural patterns. Due to limitations in terms of time available and word count, this literature review is based on findings from other studies. Research conducted previously in the same hotel provided complementary context.

Data collection of literature review

The secondary research for the literature analysis, as well as the initial stage of the social marketing process, were mainly based on academic journals, published books, reports, newspaper articles and government statistics, accessed through the internet and the digital library.

3.2.2 Qualitative interviews (exploratory)

The second stage of the social marketing process is an exploratory one. Exploratory research aims to gain “insights and familiarity with the subject area” (Collis & Hussey, 2009, p.5). In this case, the objective was to obtain an overview of the case and to explore the attitude of guests towards towel programmes in hotels. The qualitative interviews should further reveal perceived barriers and benefits of the programmes. The exploratory interviews were conducted with housekeeping employees and guests. This method is the most relevant in this case, because hotel employees are in direct contact with the guest and objective observer of guests’ behaviour. Further, obtaining specific knowledge about the attitude and perception of people cannot be achieved through other techniques (cf. Bryman, 2008).

Advantages and disadvantages of interviews

Semi-structured interviews are advantageous in order to explore data on understanding, perceptions, and attitudes and to reveal different opinions (Collis & Hussey, 2009). This open format enables all barriers to the desired behaviour to be explored. Furthermore, the method permits the interviewer to ask follow-up questions in order to obtain more and in-depth information. This is not possible in a structured interview. Through a face-to-face approach it is also possible to observe non-verbal communication, such as the behaviour of the participants (Bryman, 2008). However, in order to limit the topic and to make it easier to compare the answers in the analysis, the questions in the last part of the interview become more specific. A disadvantage of interviews is that recent events might affect the answers of the participants. Additionally, the presence of somebody accompanying the interviewee can change the dynamic of the dialogue (Collis & Hussey, 2009).

Interview design of exploratory questions

The semi-structured interview questions for the hotel employees moved from general to specific topics (cf. Collis & Hussey, 2009, p.198). The interview included open-ended questions to explore how the current towel programme works, how successful it is, and the experiences of the housekeeping employees. The interviews with the guest were also semi-structured. The first part of the interview included open-ended questions to understand how guests respond to sustainability within the holiday context and environmental activities of hotels. Furthermore, more structured clarity and depth probe questions were used to gain greater understanding of their perceived barriers and benefits of a towel programme (cf. Collis & Hussey, 2009, p.136). Special focus was given to critical issues of towel programmes – which have been identified in the literature – like perceived reliability and credibility as well as expectations. The questions can be found in appendix 1.

Data collection of exploratory interviews

The target population of the exploratory interviews was hotel guests and the housekeeping personnel in the hotel. The study utilized convenience sampling methods. The selection process was based on the readiness and availability of the participants. The sample size consists of ten guests and four hotel employees for the exploratory interviews. Out of the ten hotel guests, six were female and four were male. Appendix 2 shows a profile of the participants. Only data on gender was collected. Other demographic information was revealed during conversation, such as the nationality. The age was estimated by the author. The hotel employees were all female in the age of 30 to 50. The exploratory interviews took place in June 2014 at the hotel on Rhodes on a face-to-face basis. Detailed notes were taken. The head of housekeeping acted as an interpreter for the housekeeping employees since most spoke only Greek. The questions were asked in English.

3.2.3 Quantitative interviews (descriptive)

In the next stage, as recommended by Luca & Suggs (2010), feedback about different communication measures was obtained from hotel guests. This step of the research process had a descriptive research purpose, because it sought to “obtain information on the characteristics of a particular problem” (Collis & Hussey, 2009, p.5). The information acquired in this particular problem of the study was the perception of different messages by guests. Hence, qualitative interviews were used to develop a sound knowledge of participants’ perception of various messages. Further, the interviews ensure that effective communication criteria were met. This method was extremely relevant in this case, as

obtaining such specific knowledge about the understanding and perception of people cannot be achieved through other techniques.

Interview design of qualitative interviews

Two interviews were conducted in order to ensure a clean division between the two different layouts of communication; 'factual' and 'visualisation'. The first interviews addressed the actual message. The preferred message was then visualised with different pictures and figures (see appendix 3). Visualisation, symbols, and colours have been identified as crucial for communication campaigns to make the message more appealing and gain attention (Bell et al., 1996; Manning, 2009; Thaler & Sunstein, 2008). The second interview round aimed to find out which visualised message is most appealing to the guests. The question portfolios of the qualitative interviews are outlined in appendix 4.

The interview questions moved again from general to specific topics. The first part of the interview was unstructured with open-ended to explore data on perceptions, opinions, and attitudes. The second more structured part of the questionnaire included open-ended questions to check if certain criteria for effective environmental communication were met (van der Linden, 2014). At the end, the interviewees were asked if they had any final comments.

Data collection of qualitative interviews

The primary data collection of the interviews took place in June 2014 in the hotel on Rhodes on a face-to-face basis. This ensured that the people were met in a real-life setting, i.e. the hotels where the social marketing project took place. The interviews were partly recorded. In addition detailed notes were taken. The questions were asked in either English or in German.

The target population of the present data collection was hotel guests in Greece. The study utilized convenience sampling methods. The selection process was based on the readiness and availability of the participants. The sample size consists of 15 for the interviews about the text message and 16 for the interviews about the design. Out of the 15 hotel guests of the interviews about the message, 8 were female and 7 were male. Out of the 16 hotel guests of the interviews about the design, 9 were female and 7 were male. Appendix 5 shows a profile of the participants. Only data on gender were collected. Other demographic information was sometimes revealed during conversation such as the nationality. The age was estimated by the author. Overall, the response rate was very high (about 95 percent).

Theoretical background of message development

Since the overall aim of the social marketing process was to trigger water saving behaviour among the hotel guests, the creation of the different messages was based on behavioural theories. This approach should ensure that the messages are appealing to the guests, and that they are effectively reinforcing sustainable behaviour. Table 5 shows the six different messages that were used for the interview with the underlying behaviour theories used for the creation of the message.

Table 5: Developed messages for a towel programme that are based on behavioural theories

Message number	Message content	Behavioural theory
1	<p>Refresh your eco-sensitivity</p> <p>Kindly be informed that only towels left on the floor will be changed by your housekeeper. Thank you for helping us to act for the environment.</p>	Not applicable (existing message of hotel)
2	<p>Every towel counts!</p> <p>On average, we use 50% more water during our holidays than at home. One reused towel saves 6 litres of water. Do not want to use your towel again? Put it on the floor and we will replace it. Thank you!</p>	<p>Feedback</p> <p>Consistency</p>
3	<p>Be part of it!</p> <p>Last year our guests helped to avoid 30.000 kg of laundry which equals 450.000 litres of water. One reused towel saves 6 litres of water. Do not want to use your towel again? Put it on the floor and we will replace it. Thank you!</p>	<p>Positive message</p> <p>Feedback incl. specific goals</p> <p>Trend/Social norm</p>
4	<p>Be part of it!</p> <p>80% of our guests already reuse their towel. Do not want to use your towel again? Put it on the floor and we will replace it. Thank you!</p>	Social norms
5	<p>Be part of it!</p> <p>Last year our guests helped to avoid 30.000 kg of laundry. To celebrate this, we donated 1 Euro per kg to the WWF. Do not want to use your towel again? Put it on the floor and we will replace it. Thank you!</p>	<p>Altruistic approach</p> <p>Indirect incentive</p>
6	<p>Thank you for helping us to protect the environment (<i>on a chocolate bar</i>)</p>	<p>Non-monetary direct incentives</p> <p>Theory of reciprocation</p>

Source: Developed by the author

Message 1

The first message was the existing message of the respective hotel.

Message 2

Besides the informational knowledge about the course of action (“Do not want to use your towel again? Put it on the floor and we replace it”), there are two more elements in the message. These two elements are based on two different behavioural theories. The first one is a nudging theory - giving feedback – and the second one is based on the consistent theory.

Several studies have shown that providing people with feedback about the effectiveness of their performed actions has a positive impact in terms of triggering sustainable behaviour (Bell, Greene, Fisher, & Baum, 1996; Manning, 2009; Schultz et al., 2007; Stern, 2011). The reason is that feedback makes the invisibility of water consumption vivid and tangible. In order to make the message more effective, it is important that people believe that feedback is trustworthy (Bell et al., 1996). Further, Manning (2009, p.18) emphasised that “feedback is more meaningful when there is a baseline to which current behaviour can be compared”. Therefore, the 50 percent increased consumption during the holidays was chosen as comparative feedback. Water consumption at home serves as a baseline measure and shows people how much water they use during their holidays.

Furthermore, several studies have revealed that people want to behave in a consistent way (Cialdini & Goldstein, 2004; Lee & Kotler, 2011; McKenzie-Mohr, 2011). This behaviour pattern enhances their reputation externally and also improves their self-image (Cialdini & Goldstein, 2004). Thus, the information that people usually use less water at home can further trigger people to more consistent and thus sustainable in their behaviour on vacation.

Various studies find that people consume more water during the holidays than at home. It is estimated that 40-70 percent more water is consumed depending on the type of accommodation. An average value of 50 percent was assumed (Barberán et al., 2013; Gössling et al., 2012; TUI, 2014).

The fact that six litres of water is needed to wash a towel is based on different studies (Alliance_for_Water-Efficiency, 2010; Kuoni, 2013). The water consumption depends on different factors such as towel size, the fabric, and the washing machine. Therefore, the numbers in the reviewed studies varied, and an average value was calculated.

Message 3

This message is also based on behavioural theories such as positivism, feedback and a social trend. As mentioned above, feedback loops have already been proven to successfully change behaviour. The feedback from last year (“Last year our guests helped to avoid 30.000 kg of laundry which equals 450.000 litres of water.”) indicates a trend to the guests. It shows that they would not be the only one to reuse their towels. This feeling of group belonging can trigger the desired behaviour, since several studies have shown that other people’s behaviour, rather than media, have a significant influence on individuals’ activities (Manning, 2009; Peattie, 2010; Rettie et al., 2014). Furthermore, the high numbers show that guests together can make a big difference. This information can considerably increase desired behaviour, as the guests are informed about their cumulative impact (Teng, Horng, Hu, Chien, & Shen, 2012).

Message 4

Message four has the underlying concept of social norm(alisation) and social diffusion. A study by Goldstein, Cialdini, & Griskevicius (2008) has already revealed that applying social norms has a significant influence on guests’ towel reusing behaviour. A vast number of studies have shown before that these descriptive norms work in all different kinds of areas in

order to encourage sustainable behaviour (Brekke & Johansson-Stenman, 2008; Kallgren et al. 2000, Manning, 2009; Schultz et al., 2007). The underlying reason is that humans fundamentally pursue meaningful social relationships. So when they know that the majority approves of a certain behaviour, this behaviour is perceived as normal. Thus, they adopt it as well because they wish to be accepted by others (McKenzie-Mohr, 2011; Rettie et al., 2014; Cialdini & Goldstein, 2004).

The fact that 80 percent of the guests reuse their towels is taken from the exploratory interviews, which had been conducted last year (Gössling, unpublished). During the interviews, approximately 82 percent of the people stated that they would use their towel for more than a day.

Message 5

Message five is based on an altruistic approach. The information indicates that the hotel is not interested in the monetary savings from the saved laundry, but instead has decided to donate the money to a charity.

The money saved by the guests' sustainable behaviour is used for a positive cause. Hence, the guests get an indirect reward for their behaviour (cf. Kuoni, 2013). A study by Shang, Basil, & Wymer (2010) has shown that the hotel improves its reputation and is seen as altruistically motivated when it donates the saved money from a towel programme. Many other publications revealed that (non-monetary) incentives trigger sustainable behaviour practices, especially when the motivation is low (Gardner & Stern, 1996; Lee & Kotler, 2011; Teng et al. 2012; Kasim, 2007).

Message 6

The last message was not one with instructions, but a little incentive for the guests in the form of a mini-chocolate bar linked to a thank-you note. Non-monetary direct incentives like that provide guests recognition and appreciation for their behaviour. Therefore, it is a symbolic reward for them (Lee & Kotler, 2011). As noted above, incentives and rewards have been shown to be successful in triggering environmentally friendly behaviour. According to the theory of reciprocation, the chocolate can further strengthen these behaviour patterns when received at the beginning of the stay. As Cialdini & Goldstein (2004, p.599) once stated “the norm of reciprocation—the rule that obliges us to repay others for what we have received from them—is one of the strongest and most pervasive social forces in all human cultures”.

3.2.4 Field experiment

On one hand, interviews are important to reveal perceptions and understandings of certain things, but, on the other hand, the participants are rarely objective in their answers to questions about the effectiveness of the messages. This problem is known as the value-action gap. Many studies have revealed that there is a gap between people's reported attitudes, values, and intention and their actual behaviour (Jansson et al., 2011; Rettie, Burchell, & Barnham, 2014). This can be especially relevant in the holiday context - as described in chapter 2. Due to this phenomenon, the actual effectiveness of the message was tested within an experiment.

An experiment is analytic research, which is also known as causal research, whereby the researcher “aims to understand a phenomena by discovering and measuring causal relations” (Collis & Hussey, 2009, p.5). It is, therefore, not only a description of a phenomenon, but

also an analysis and explanation of ‘why’ something is happening (Wilson, 2010; Collis & Hussey, 2009). This research method corresponds with the fourth stage of the social marketing process - conduct a pilot (see figure 2). The aim of the experiment was to find out if people change their actual behaviour because of a social-marketing intervention. Therefore, a field experiment was used to measure the relationship between two variables. The independent variable is the communication measure; the dependent variable is the participation rate of the towel programme. The applied primary research method in this step is a quantitative one.

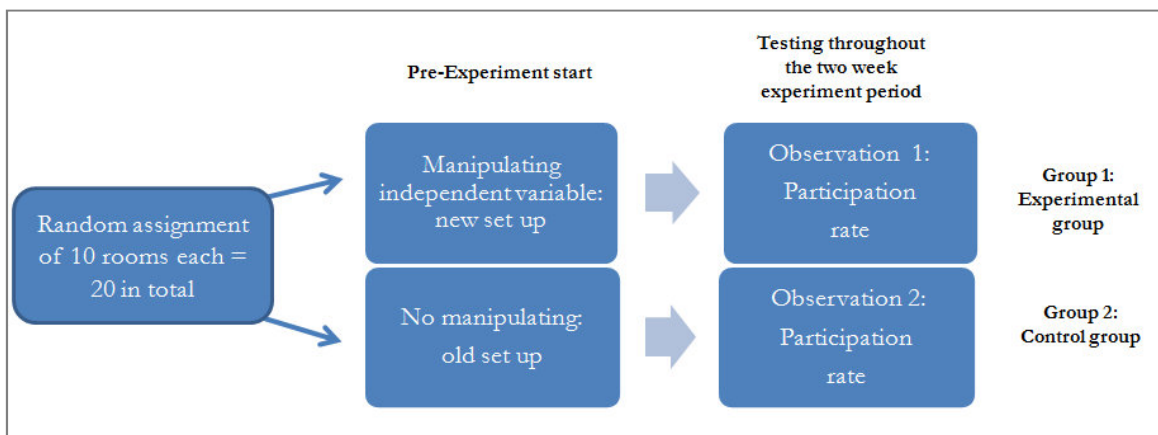
Advantages and disadvantages of experiments

The advantage of an experiment in a natural setting is that it is real-life one, i.e. the guests involved are not aware of their participation: Since they are not influenced, the experimental arrangement counteracts the reactive effect (cf. Bryman, 2008). Further, the experiment measures the actual behaviour of the target group and not the different perceptions and attitudes. Many academics argue that it is preferable to measure the behaviour, because it is the overall aim of the social marketing intervention (Helmig & Thaler, 2010; Truong, 2014b). Additionally, numerous studies have shown that a value-action gap exists. However, there are also disadvantages associated with natural-setting experiments. The main one is that the researcher does not have much control over extraneous variables, such as the guests' environmental attitude, education, and habits. Accordingly, the result can be influenced by other variables than the independent variable. In comparison, in artificial settings it is easier “to eliminate certain variables or keep one variable constant” (Collis & Hussey, 2009, p.74). This limitation can be addressed by selecting a homogenous sample.

Experiment design

The experiment was conducted with an independent-sample as illustrated in figure 4. Two groups were selected: one experimental and one control group. Subsequently, it is possible to compare the results of these two independent samples.

Figure 4: Independent-sample design of experiment



Source: Developed by the author

Originally, a second design (repeated-measures design) was set up with an addition sample of ten rooms to test the effect of the intervention on same individuals. However, the implementation of this design has shown to be not practicable in real life. To ensure the validity of the study these ten rooms were taken out.

To make the group as homogenous as possible, the allocation was random. According to Bryman (2008, p.37), “randomization of experimental participants is crucial, as it means that the members of the different groups in the experiment are to all intents and purpose alike”. Moreover, the profile of the hotel guests is quite homogenous. It partly limits the influence of extraneous variables, because some variables kept constant (cf. Collis & Hussey, 2009). Ten rooms were selected for both groups (control group and experimental group). It was ensured that in these rooms only hotel guest stays, which arrived after the interviews were conducted. This guaranteed that the guests living in these rooms did not know about the ongoing research. This is essential since knowledge about the water management project could have influenced their behaviour. Overall, the sample size was 20. It has to be noted that this sample is not big enough to have statistical validity.

Data collection of experiment

The primary data collection for the experiment took place in June 2014 in the hotel on Rhodes. Thus, it is a natural setting. The rooms were observed over a two week period. A worksheet, adopted from the Kuoni Group (Kuoni, 2013), was used to record the reused towels. The housekeeping employees were advised to count the towels that the guests have asked to be exchanged during their daily room cleanings. The counting was divided into large and small towels. The reused towels were defined as ‘every towel that is NOT placed on the floor’. It was ensured that the guests stay for more than one night in the rooms. The days of departures were taken out of the counting. Rooms with ‘Please do not disturb’ signs were counted by default as no request for new towels. The employees got additionally instruction to change only towels, which were placed on the floor. Further, the new sign (see appendix 6) was used for the communication of the towel programme. It was located on eye-level next to the mirror in the bathroom.

The 4P-framework served as basis for the experiment set-up, which is described for in more detail in chapter 4.3. Based on social marketing theory, the following hypothesis is made:

Hypothesis 1: Guests, when exposed to the new set-up of the towel programme, will reuse their towels more often than guests with the traditional set-up of the towel programme.

3.3 Methods used for data analysis

The data from the interviews were transcribed, categorised and analysed within the conceptual framework. Only relevant findings from the interviews were used for this paper. Other subjects, which arose during the interviews and which were not related to the objective of the present study, were left out. These subjects include other environmental topics (i.e. waste) or general comments about the hotel. The collected data are interpreted using qualitative methods for the interviews and quantitative methods for the experiment. Specific criteria outlined at the different stages of the process were used for the analysis. These criteria are outlined in table 6 and further described in the next section.

Table 6: Overview of applied research methods and utilized criteria for the analysis

Stages of social marketing	Research method used for data collection	Criteria used for analysis
1st: Selecting behaviour	Literature review	Criteria: <ul style="list-style-type: none"> - Impact of behaviour - Current compliance rate - Probability of engaging people
2nd: Identifying barriers and benefits	Qualitative interviews (exploratory) with hotel employees and guests	Barriers: <ul style="list-style-type: none"> - Internal barriers: linked directly to an individual - External barriers: reside outside an individual
3rd: Developing strategies	Not applicable	Social marketing mix/adapted 4-P framework: <ul style="list-style-type: none"> - Proposition - Cost of involvement - Accessibility for consumers - Social communication
4th: Conducting a pilot	Qualitative interviews (descriptive) with guests about different messages and designs	Three dimensions of knowledge: <ul style="list-style-type: none"> - factual - procedural - effectiveness
4th: Conducting a pilot	Quantitative field experiment in hotel rooms	Statistical measures: <ul style="list-style-type: none"> - mean

Source: Developed by the author based on McKenzie-Mohr, 2011; Peattie & Peattie, 2009; van der Linden, 2014

For the analysis of the literature review the three criteria outlined; with these criteria one can determine if a behavioural pattern is potentially successful for a social marketing intervention. These four criteria are the (a) potentially impact, (b) current compliance rates and (c) probability of getting people engaged in the activity. Table 7 shows the different factors and the desired outcome of each of them. The process corresponds with the first stage of the social marketing process as table 6 illustrates.

The findings of the exploratory interviews are categorised into internal and external barriers. Internal barriers are linked directly to an individual. They could be, for example, a lack of knowledge with regard to what can be done in order to act sustainably or it could also be an absence of motivation (McKenzie-Mohr, 2011). External barriers reside outside the individual. For example, people's access to the desired behaviour might be hindered by a lack of infrastructure or monetary issues. Furthermore, the findings of the exploratory interviews are analysed within the social marketing mix by Peattie & Peattie (2009). This step corresponds with the third stage of the social marketing framework as table 6 illustrates.

Table 7: Criteria that determine if behaviour is potentially successful for social marketing intervention

Criteria	Desired outcome
Impact of behaviour	As high as possible
Current compliance rate	As low as possible
Probability of getting people engaged	As high as possible

Source: Developed by the author based on McKenzie-Mohr, 2011

The criteria used for the analysis of the qualitative interviews - about perceptions of different messages and designs - are the three different dimensions of knowledge outlined by van der Linden (2014). Van der Linden (2014) proved that these are three preconditions for successful communication that aims to induce certain actions. The dimensions include factual knowledge, procedural knowledge and effectiveness knowledge. Factual knowledge means that the people understand the information communicated. Procedural knowledge means that they know the appropriate course of action that brings more sustainable behaviour. Effectiveness knowledge means that the people know how effective each course of action is. The analysis of the interviews examines if the different messages (outlined in table 5) meet all three dimensions. The step corresponds with the fourth stage of the social marketing process as illustrated in table 6.

For the analysis of the experiment, statistical methods were used that measure the central tendency (i.e. mean) with the aim to gain insights into the towel demand. The average request rates were calculated according to Kuoni (2013) who established a water management manual for hotels.

3.4 Limitations and scope

The following part discusses the limitation of the study.

Scope

Time and word count constraints demanded a careful choice of scope. The boundaries of the primary research were drawn around the second and fourth step of the social-research process. Further, hotels on Rhodes, in Greece, were chosen as the case study. The geographical scope is justifiable, because the island provides a favourable context for a social-marketing approach in regard to water savings in the tourist branch (see chapter 1). The implication of the chosen research method (i.e. case study) on the generalizability of the study will be discussed in chapter 7.

The study did not look into technical measures that decrease water consumption, because these measures were explored by an external consultant the year before. The hotels had already implemented many of the recommendations and are constantly improving their water footprint through various technical measures. In addition, as explained in detail in chapter 3, communication measures are essential for an effective intervention.

Circumstances

Not all interviewees were native speakers of English or German. This could have led to language bias, since the questions were asked in English or German. Further, due to time and resource constraints, it was not possible for the author to monitor the experiment. The housekeeping employees were responsible for counting the towels. They were also responsible to write down the records. According to McKenzie-Mohr (2011), such external reports are prone to bias. For example, it should be considered that these research assistants might have made careless mistakes, since June is a busy time and the counting process is not one of their main responsibilities. Further, the housekeeping staff was mostly Greek. Hence, there may have been problems in understanding the given instructions on the work sheet.

Finally, the restricted access to some resources causes limitation to the study. Not all secondary data were accessible to the author. Thus, it was not possible to go through all publications that were of interest to this project.

3.5 Ethical considerations

The next paragraph is concerned with ethical issues of the study. Before the interviews were taken within the hotel, permission was acquired from the hotel manager.

The interviews were confidential and no personal information was gathered. Additionally, the interviewees were asked beforehand if they would like to participate. They were further asked for their permission to record the interviews. The participants were assured that any information that they gave would remain anonymous. Moreover, no political or religious issues were raised.

However, there is an issue in social marketing with “nudging” and concerns over whether it undermines people's free will. Kotler & Zaltman (1971, p.3) noted that “others would despair over the spectre of mass manipulation”. Andreasen (1997) noticed that there is a risk that people performing a social-marketing project might impose their own understanding of ‘good’ and ‘bad’ behaviour. This concern stems from the fact that social marketing aims to improve people's decision-making process. Furthermore, social marketing or nudging rely on insights from psychology to achieve certain outcomes (cf. Thaler & Sunstein, 2008). Therefore, it comes close to restricting people's freedom of choice.

Within natural-setting experiments, people are not asked for permission to be part of the study (cf. Driscoll & Brizee, 2012). However, this lies in the nature of the research design and is a necessary condition. The guests need to be unaware of their participation so that they behave as if in a ‘real-life’ situation.

Another ethical consideration stems from the outcome of the study. It might be possible that housekeeping employees will earn less money or will even be dismissed. They might be made redundant, due to a lower workload. However, this risk is very low since the workload of housekeeping employees is very high in the hotels under focus. It would be rather a relief for them.

3.6 Audience

This paper is written for academics working on water management and social marketing. Further it can be of interest to governmental bodies working with behaviour change campaigns related to water savings. However, in particular, it aims to contribute to the ongoing water-management project “Wertvolles Wasser” (English: “Precious water”) of the tour operator Thomas Cook (cf. Thomas_Cook, 2014). Thomas Cook intends to publish a water-management handbook for hotels, with examples of best practices and case studies aimed at decreasing the overall water consumption of the hotels. The overarching objective is to provide Thomas Cook a better picture of the effective implementation of towel programmes. A further application of the findings outside of Thomas Cook - such as other hotel (chains) - is highly welcome.

4 Results of the social marketing intervention

The next chapter described the findings of the research. It is structured within the different stages of the social marketing framework as outlined in figure 3. After every stage the findings are analysed with the criteria described in chapter 3.

4.1 Stage 1: Selecting behaviour - Findings and analysis of the literature review

Greece has many international tourist arrivals, but at the same time faces water scarcity. The tourist demands thus compound the problem. The water consumption per guest in a hotel can be three times more than at home (Barberán et al., 2013). The largest amount of water is usually consumed in guest rooms, but laundry and kitchen also contribute to a big portion of overall water usage as figure 2 illustrates. Research in 2013 – at the hotel of study – revealed similar numbers. Garden irrigation, followed by guest rooms, pool, and laundry had the highest water consumption. The study has further shown that the hotel changed towels and bed sheets on a daily basis or every second day (Gössling, unpublished). Therefore, triggering guests to reuse their towels could make a large impact on the water footprint of the hotel.

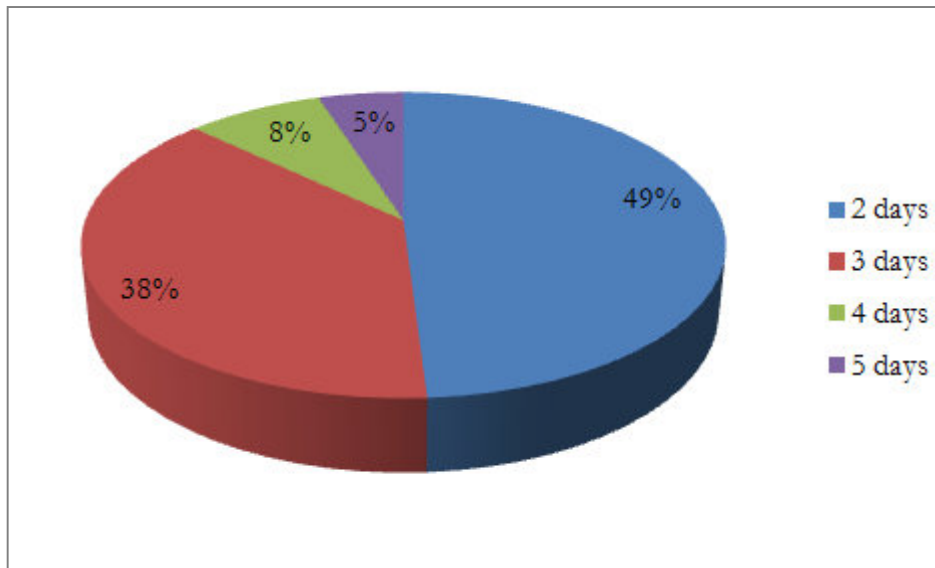
The following section looks into three criteria by McKenzie-Mohr (2011) determining whether reusing towels is potentially successful and worth promoting for a social marketing intervention. These three criteria are (a) potential impact, (b) current compliance rates and (c) probability of engaging people in the desired activity. The criteria were described in more detail in chapter 3.3.

(a) The study conducted in 2013 by Gössling (unpublished) exposed that 22 litres are needed per guest night to wash all towels and bed sheets. This number is similar to previous findings of water consumption of towels and bed lines (cf. Alliance for Water-Efficiency, 2010; Kuoni, 2013). Thus, a lot of water can be saved when guests would use their towels for more than one day. The impact can be, therefore, regarded as high.

(b) The exploratory interview with the head of housekeeping revealed that the hotel implemented recently a towel programme. However, the hotel did not have not a monitoring system in place. The head of housekeeping estimated that the towel reuse rate was about 20 percent by that time (cf. chapter 4.2). This number lies within the range of other hotels' compliance rates, which are outlined in chapter 1.2.3. This rate is relatively low and demonstrates that there is lots space for improvements.

(c) The third factor is about the probability of engaging people with reusing towels. Studies in the past indicated that the majority of people are willing to reuse their towels (Paschke et al., 2002; Tixier, 2008). According to Paschke et al. (2002), 87 percent of the guests appreciate such programmes and would be comfortable to use their towels for 2.5 days. This willingness was confirmed by a survey in the hotel of the study, as it revealed that over 80 percent of the guests would reuse their towel (Gössling, unpublished). Figure 5 indicates that 49 percent of guests would use their towels for two days; further 38 percent of the guest would use it for three days and the rest (13 percent) of the guest would use it for four or five days. Thus, the probability of engaging people in reusing towels is high. These findings additionally show clearly a value-action gap, as the current reuse rate in the hotel (20 percent) seems to be much lower than the stated one (87 percent). Therefore, a social marketing intervention could reveal barriers, which cause this value-action gap.

Figure 5: Numbers of days people are willing to use their towel in the hotel of this study



Source: Developed by the author based on Gössling, unpublished

In summary, the findings above show that large amounts of water can be saved when guests reuse their towels. The impact is, therefore, high. The current compliance rates are relatively low and leave lots space for improvements. Consumer show further high willingness to reuse their towels and thus the probability of engaging people in the desired behaviour is high. Overall, all favourable characteristic of McKenzie-Mohr (2011) criteria apply for the behaviour ('reusing towels') and make it potentially successful for a social marketing intervention.

4.2 Stage 2: Identifying barriers and benefits

The aim of this stage is to identify associated barriers and benefits to the selected behaviour. Exploratory interviews were used to reveal the attitudes, needs and current behaviour of the target audience – hotel guests. The following chapters describe these findings.

4.2.1 Findings of exploratory interviews with housekeeping employees

The next section summarises the findings of the exploratory interview with the housekeeping employees.

Current towel programme of the hotel

The interviews revealed that on the ground of a study in 2013 about the water footprint, the general manager of the hotel decided to implement a towel programme. This measure had been recommended by an external consultancy conducting the study and works as follow: when guests arrive at the hotel, they receive a set of three towels: one small towel, one large

towel and one towel for the floor. Cards, informing guest that towels left in the bathtub or on the floor will be changed by the housekeeping employees, are placed on bedside tables. According to the head of housekeeping, the message is straight forward and thus guests do not have problems with the understanding. Further, the interviews revealed that enough facilities in the bathroom exist, where towels can be hanging up for drying. The head of housekeeping keeps approximately track how many towels housekeeping employees receive, but they do not keep detailed records about reuse rates. According to housekeeping employees, about 20 percent of guests reuse their towel. These guests usually keep the towels for two to three days and few guests ask for new towels on a daily basis. In the experience of the housekeeping employees, the towel programme is widely accepted by the guests. Nevertheless, the interviews revealed that housekeeping employees sometimes replace guests' towels, even though it had not been indicated by them, when the employees perceive towels as dirty. Additionally, after three days – at the latest – hotel employees provide new towels. According to the head of housekeeping, “the guests in a 5 star hotel expect that the towels are changed on a regular basis, especially in such a beach environment as here”. Moreover, the interview showed that specific quality standards are prescribed by management, stating that towels need to be changed after certain days. The head of housekeeping further stated that “of course our guests always come first. We try to make them happy and please them to prevent complaints.”

4.2.2 Findings of the exploratory interviews with guests

The next section summarises the findings of the exploratory interview with hotel guests. A profile of the participants can be found in appendix 2.

Environmental sustainability in tourism

The interviews revealed that guests' opinions, with regard to environmental responsibility in tourism, were quite diverse. The majority of the participants acknowledged that the hotel is engaged in environmental activities and also encouraged the hotel to communicate these activities. In their perception it is important to act for the environment as one woman stated:

“It is good that the hotel is engaged in environmental activities. I do not like the all inclusive approach. It produces so many plastic bottles, so much waste. It reminds me of McDonald-culture.” (Female hotel guest, 60-70 years, translated by the author)

However, one interviewee declared that it is the hotels task to take care of the environment. In contrast, some other guests indicated that, in their eyes, it is everyone's responsibility to act in a sustainable way. As one man stated:

“Everybody has the responsibility to look after environmental issues; it does not matter if it's a households or big companies. Everyone should act responsible; we all good a bit to play.” (Male hotel guest, 40-50 years)

One male participant mentioned as well that he does not believe that the hotel is actually thinking about the environment, but that the profit of these activities is more interesting to them. Nevertheless, in his eyes it is fine when the hotel is also benefiting from their resource-saving activities. However, most of the interviews stated that they do not want to actively engage in environmental activities during their holidays. They perceive it as a time, during that they do not want to deal with such issues. For these guests, their holidays is a time to switch off from daily life. The following statement by a man supports this view:

“I want to rest and do not want to think about the environment during my holidays. Or be reminded about it. I do not want to get actively engaged into environmental activities, like going to demonstrations.” (Male hotel guest, 50-60 years, translated by the author)

Another male participant stated that factors, such as environmental or social issues, are decision criteria with regard to choosing a holiday destination as he does not want to deal with these issues during his holidays. He stated “I do not want to see starving people in Africa during my holidays” (Male hotel guest, 50-60 years, translated by the author).

Acceptance of towel programmes

However, when directly asked about towel programmes, each of interviewees stated that they appreciate such programmes. The reasons for this acceptance differ though. The interviews revealed that the environment was stated by guest as a main reason. Participants proposed that it is not good for the environment when the towel is changed on a daily basis. They stated that towel replacements are accompanied by higher consumption of water, washing powder, electricity and labour. Many also emphasise the amount of waste water produced and the chemicals from the washing powder that go down the stream. Further, some guests perceive it as a passive contribution and thus a low involvement activity. Then again others stated that reusing towels is an active contribution, but one, which is acceptable during holidays. The main explanation was, mentioned by almost half of the participants, that they do also not use their towels for just one day at home. Thus, they see no point to do it different during their holidays. A woman’s statement captures this view to the point as she said:

“It is nice to have luxury during holidays, but I mean, I do not have to forget all my principles. At home I also use my towel for a couple days. Why should not I do it here as well?” (Female hotel guest, 30-40 years, translated by the author)

One woman additionally stated that the cards about the towel programme are useful information, as people often solely do not know that their actions have a big impact on the environment. Thus, she thinks that it is good to be reminded about it. Additionally, half of the participants mentioned that towel programmes are standard in many hotels. The interviews showed that the majority of the participants would use their towels for more than one day. Only two interviewees persist on new large towels on a daily basis. Some mentioned that small towels should be changed every day. Further, interviews pointed out that they hang up their towels outside for drying. When asked about the expected service of a hotel, no one perceived towel programmes as a loss of quality. However, some mentioned that it is important to change dirty towels, although these towels might not have been placed on the floor. Interestingly, the majority of participants prefer such a system and perceive it as higher quality, because the towels get only changed on request. Two interviewees explicitly mentioned that they perceive it as superior that guest can decide on their own when they want a new towel and that not the housekeeping personal makes this decision. One statement of a male participant summarises this view suitable as he said:

“I like the signs. You can make the decision on your own if you want to keep it or not. Actually, such programmes have more quality, because you can decide on your own what you want. Otherwise, they make the decision for you.” (Male hotel guest, 30-40 years, translated by the author)

Implementation of the programme at the hotel

Almost half of the interviewees mentioned that they did not notice signs about the programme or they stated that they have only seen these signs after a couple days. Some participants declared that the cards are usually placed in the bathroom, but that this was not the case in the hotel. Further, since the cards are right next to the telephone and emergency button, a woman stated that she first thought that the cards are instructions for these surrounding facilities. The interviews additionally revealed that another critical aspect was the implementation of the programme. Some guests pointed out that the housekeeping employees change the towels although it had not been indicated by them. They further stated that the hotels should conform to their own instructions when they have such signs set up. Another participant mentioned that he observed other water-wasting activities in the hotel. He pointed to activities such as the garden irrigation and provision and cleaning of the pools. He did not perceive the towel programme as credible as the hotel had other activities going on that consume large amounts of water. For him, the towel programme of the hotel is, therefore, solely motivated by economic reasons.

4.2.3 Analysis of exploratory interviews: internal and external barriers

The next part reflects on the findings of the exploratory interviews with the housekeeping employees and guests. The results are categorised in internal and external barriers as described in chapter 3.3.

Internal barriers

Other studies showed that people do not transfer environmental-friendly practices into the tourism context due to various reasons (see chapter 2.5). At a first glance, it also seems that this awareness-attitude gap could be a psychological barrier for the hotels' towel programme, as many interviewees stated that they do not want to get actively engaged in environmental related activities during their holidays. It is perceived as a time where they do not want to deal with it. Additionally, some participants forwarded the environmental responsibility to hotels. These results certainly showed that the participants place high values on recreation during their holidays. Thus, the cause of travel is more important to them than environmental protection which indicates that there is a lack of motivation (cf. Stern & Oskamp, 1987). Conversely, when asked directly about towel programmes, all participants stated that they appreciate this kind of environmental engagement and are willing to use their towels for more than one day. These findings are confirmed by hotel employees' impression that guests acknowledge the towel programme. Thus, although people do not want to get actively involved during holidays, they accept reusing their towels. The findings show that this attitude gap can be explained by several reasons. Firstly, the activity of reusing towels is perceived as low involvement. Thus, it is not hampering their holiday experience. A demonstration, on the other hand, would require much more involvement as a male participant stated (cf. Stoll-Kleemann et al., 2001).

Additionally, the desired behaviour, to use towels for more than one day, is an activity that people carry out at home as well. Thus, reusing towels is perceived as a standardised behavioural pattern, imposing no decrease of convenience. It is perceived more as a habit, which people can transfer effortlessly from home to the holiday context (cf. Barr et al., 2010; Paschke et al., 2002). There are additionally indications that the consistent theory applies for guests of the hotel. This is reflected in the participants' statement that they do not behave differently at home, so they do not see a point to do it differently during the holidays. This could be an evidence that people want to behave consistent and, thus, that they transfer

residential behavioural into the tourism context (cf. Cialdini & Goldstein, 2004; Lee & Kotler, 2011).

Further, the statement from participants that towel programmes are standard in many hotels is an illustration of a normalisation process of the desired activity. In the perception of the participants, towel programmes are widely accepted in society. Thus, they also acknowledge the reuse of towels during their holidays (cf. Manning, 2009; Peattie, 2010; Rettie et al., 2012). The results additionally indicate that the participants are familiar with towel programmes and that they know such processes from other hotels. It can be implied that people understand what they can do to improve the environmental footprint. There is thus no lack of knowledge how to act sustainable, which could hinder individuals to engaged in pro-environmental behaviour (cf. van der Linden, 2014). Consequently, there is no likelihood that a cognitive dissonance (knowing that the current behaviour is unsustainable, but not knowing how to improve it) occurs among guests (Festinger, 1965).

The findings show that there does also not seem to be an absence of motivation among guests (cf. Stern & Oskamp, 1987), which could have constitutes a psychological barrier. Participants are highly educated and many are aware of the different facets of the environmental pollution and degradation of the undesired behaviour. On the ground of this environmental impact, the majority of participants stated that they would use their towels for more than one day. The perceived beneficial outcome for the environment can be, therefore, regarded as perceived benefit by the guest.

Another psychological barrier could occur when people think that towel programmes are not credible (Paschke et al., 2002; Shang et al., 2010). This could be the case, for example, when guests perceive towel programmes to be solely driven by economic reasons (cf. Sloan et al., 2009; Teng et al., 2012). The findings show here contrasting results. The majority of the participants think that the programme is good, because they prefer to decide on their own whether they would like new towels. Therefore, some guests perceive towel programmes as very valuable since they are not patronised. The possibility to decide on one's own can be thus regarded as benefit to the desired behaviour.

Then again, the findings show that other factors decrease credibility of the intervention. This is illustrated by one of the participants' statement saying that he does not believe that hotels do not think about the environment, but that profit is more interesting to hotels. This is supported by another participants' observation that the hotel has other water-wasting activities going on, such as the daily pool cleaning. Hence, he does also not perceive the towel programme as credible as it seems to him to be motivated by economic reasons. Another problem, in regard to credibility, is the non-compliance behaviour of the housekeeping employees. As some participants have stated the housekeeping employees exchange towels although it has not been indicated by them. Guests were dissatisfied with hotel employees' behaviour, as they felt ignored when the employees are not following guests instructions. This indicates that guests might not perceive the towel programme as reliable. However, studies have shown that credibility is one of the most important factors for a successful intervention (Inoue & Kent, 2013).

External barriers

Provision of infrastructure plays an important role in this category (cf. Whitmarsh et al., 2011). The interviews revealed that there are enough facilities in the bathroom, where people can hang up their towels for drying. This is a necessary condition for reusing towels. Some participants additionally mentioned that there outside possibilities exist to hang up towels.

Hence, from a practical point of view, the desired behaviour is easy accessible and readily available for guests. The provision of infrastructure thus does not constitute an external barrier.

However, the findings demonstrate a clear external barrier in regard to the communication of the programme. Almost half of the interviewees have not noticed towel signs or they mentioned that they have only seen cards after a couple days. As a reason the location of the cards was mentioned as they are placed on the bedside table, which was perceived as an unusual place. Interviewees stated that the cards are normally located within the bathroom. However, in the hotel of the study, this was not the case. This indicates that prompts are missing, which are an important part for effective communication (Manning, 2009; Paschke et al., 2002). The findings additionally show that another problem with regard to the design of the signs, as it was perceived to be inconspicuous. One female participant mentioned that the design of the cards does not relate to towel programmes. Furthermore, due to its location signs were mixed up with instructions for the phone or emergency button. These findings are evidence that the cards are not noticeable for guests. The programme is not communicated properly to the participants and, in turn, guests are not aware of it and cannot adopt their behaviour towards it.

In summary, the results indicate three main barriers, which need to be tackled. The first two relate to credibility. They include the disregard of the instructions by the housekeeping team and other ongoing activities consuming high amounts of water. Further, the communication of the programme is a major weak point and constitutes thus a barrier. The findings further revealed two benefits to the desired behaviour; first the perceived beneficial outcome for the environment and secondly the possibility to decide on one's own when to receive a new towel. Table 8 outlines the identified issues in the hotel and illustrates, which parts of the social marketing mix can address these barriers. The social marketing mix is further explained in the next chapter.

Table 8: Overview of identified barriers

Number	Barrier	Underlying theory	Social marketing mix element that addresses identified barrier
1	Sign in unnoticeable location; inconspicuous design of the card	Elements of successful communication are missing such as a specific message, appealing design and prompts to make cards noticeable	Social communication
2	Disregard of the instructions in regard to towels by the housekeeping team	Low credibility, Cognitive dissonance	Cost of involvement (psychological barrier)
3	Other water activities that consume high amounts of water	Low credibility, Cognitive dissonance	Cost of involvement (psychological barrier)

Source: Developed by the author

Additionally, some statements revealed different hints how the current towel programme could be enhanced. For example, one woman said that it is favourable to have such signs, as people often solely do not know how their actions impact the environment. This indicates that educational information as well as feedback might be an effective strategy to foster behavioural change. Another participant mentioned that it is important to be reminded about one's own environmental footprint. This again shows the importance of prompts and feedback.

4.3 Stage 3: Developing strategies - Applied social marketing mix

The third step of the social marketing process aims to develop a strategy that systematically removes the perceived barriers to the selected behaviour and which makes the reuse of towels as convenient and affordable as possible for guests. Therefore, the findings from the exploratory interviews are applied within the social marketing mix that was described in chapter 2.3.3. Special focus is given to the perceived barriers and how to overcome them. The analysed social marketing mix is the basis for the implementation of the experiment in stage four.

Proposition

The proposed behaviour for guests is to reuse towels.

Accessibility

The goods, which need to be provided during the intervention to trigger desired behaviour, are possibilities to hang-up towels for drying, i.e. hangers. This infrastructure provision makes the desired behaviour easily 'accessible' for guests (cf. Peattie & Peattie, 2009). The hangers should preferably be in the bathroom, as it is the point-of-action. This close proximity is necessary to make the desired behaviour as convenient as possible for guests, which in turn increases the likelihood of engaging them (McKenzie-Mohr, 2011). The findings showed that this infrastructure provision is given in the hotel.

Social Communication

Problem description 1

Communication about the environmental impact of activities is essential when one wants to induce behavioural change. In addition, it is necessary to show individuals *how* individuals could change their current behaviour (van der Linden, 2014). Communication, however, is one of the main barriers of the towel programme. Many of the guests have not noticed signs or they mentioned that they have only seen the cards after a couple of days. The underlying barrier is the unusual and unnoticeable location on the bedside table. Another issue is the design of the card, which is not appealing to guests.

Necessary actions 1

The cards need to be placed at the point-of action. As the cards act as a prompt, they should be further at a location, where they are easily noticeable (cf. McKenzie-Mohr, 2011). For the hotel under study, it is suggested to place the cards on the filing under the mirror right next to the washbasin in the bathroom. Additionally, the cards need to be designed in a more appealing way to gain people's attention (cf. Bell, Greene, Fisher, & Baum, 1996; Manning, 2009; Thaler & Sunstein, 2008). The message can also be rewritten with a special focus on reasons of the towel programme (i.e. resource conservation). Here, the perceived cost of the competing behaviour (i.e. water consumption) can be highlighted to the target audience.

Cost of involvement

Time and effort are part of guests' cost of involvement (Peattie & Peattie, 2009). It is thus important to make the reuse of towels as convenient as possible for guests. Here again, there seems to be no issue, as hangers are provided in the bathroom. Further possibilities are given on the terraces or balconies. The desired behaviour is, therefore, easy accessible. However, other cost of involvement elements consist in addition of psychological barriers inherent to individuals (cf. Peattie & Peattie, 2009). The findings show that the majority of participants accept the towel programme and that they are willing to reuse their towels. In addition, many guests associate such programmes as low-involvement activity that is not hampering their holiday experiences (cf. Stoll-Kleemann et al., 2001). Moreover, reusing towels is perceived as a habit, that guests can transfer effortlessly from home to the holiday context (Barr et al., 2010; Paschke et al., 2002). Nevertheless, some guests criticise the non-compliance behaviour of hotel employees; other guests perceive the towel programme as green washing. This lack of credibility can lead to powerful psychological barriers as it has shown to be an important success factor for social interventions (Inoue & Kent, 2013). These two issues related to the programme are explained in more detail in the next section.

Problem description 2

As the interviews revealed, the issue with regard to non-compliance behaviour of housekeeping employees is grounded in the hotel employees' fear of complaints. They pursue providing adequate service for guests and they further want to prevent complaints. The findings show also that hotel employees think that guests in a five star hotel expect that towels are changed regularly. Thus, they replace towels from guests, although that might not have been indicated, when hotel employees perceive towels as dirty. From a theoretical point this behaviour is good, because guests expect it as well. From a practical point, it often leads to unnecessary exchanges, as the sensibility of the housekeeping employees in regard to the level of dirtiness, seems to be comparable higher. As a result, a cognitive dissonance could occur among guests, since employees are not following their instructions (cf. Festinger, 1965).

Necessary actions 2

It is, therefore, necessary to give the housekeeping employees detailed training and instructions to eliminate this non-compliance behaviour.

Problem description 3

The second issue, related to other water-wasting activities, is complex. Some guests perceive the towel programme as solely motivated in economic reason, because they observed other activities consuming large amounts of water in the hotel. Consequently, the towel programme loses credibility, which can lead to lower compliance rates and a bad reputation for the hotel (cf. Paschke et al., 2002; Shang et al., 2010).

Necessary actions 3

Water is often necessary to provide hotel services, such as pools or green areas. Nevertheless, in these areas technical or managerial measures can be implemented. In the hotel of the study, for example, a grey water recycling system could be installed. Other possible measures could include the provision of a pool with sea water. The hotel needs then to communicate their environmental effort to guests so that they know that the towel programme is not the only measure with regard to sustainability. The hotel of the study is already constantly working on various technical and managerial measures to improve their water consumption.

Table 9 summarises the findings of the interviews within the 4P framework and further shows the actions that are necessary to address the identified barriers.

Table 9: Summary of interviews result within 4P framework including necessary actions

Social marketing mix	Applied to case study	Necessary actions
Proposition	- Reuse of towels by guests	
Accessibility for the consumer	- Hangers provided in the bathroom (point-of-action) - Further possibilities to hang towels: balcony, terrace	
Social communication	- Sign with instructions on the bedside table, where it is not noticeable for guests - Design of the card is not appealing to guests - Message is unspecific	- Change of location: cards needs to be placed in bathroom on eye-level (acting as prompt) - Redesign of message and visualisation
Cost of involvement	- Easy accessible - Behaviour is habitual. Thus, it is perceived as low-involvement activity - High motivation of guests - Perceived better service quality, as guests can decide on their own when towels are changed - Programme is seen as industry standard - Disregard of instructions - Other ongoing activities that consume large amounts of water	- Comprehensive training of employees to make them comply with guests requests - Reduce other activities that consume high amounts water through technical and managerial measures

Source: Developed by the author

4.4 Stage 4: Conduct a pilot - Findings of qualitative interviews and field experiment

The fourth stage of social marketing process is the pilot phase. In this study, it included two steps. The aim of the first step was to capture peoples' understanding and reaction to messages and visualizations and to identify the most appealing one. The second step was the field experiment to test the effectiveness of the social marketing intervention. The next chapter describes first the findings of the qualitative interviews about the different messages and visualisation. The messages tested in this interview were outlined in table 5. A profile of the participants can be found in appendix 5.

4.4.1 Findings of interviews about different messages

Message 1

The findings show that the message is clear to participants. They understand the information and course of action that is communicated. One participant explicitly stated that the instructions are given first (“Only towels left on the floor will be changed by your housekeeper”) and then the explanation of the request follows (“Act on the environment”). However, some interviewees pointed out that the content of the message is not very informative, because it does not say much about the environmental impact. One participant stated:

“The message is not very specific about the environmental impact. It is not communicated why exactly one should reuse a towel. The message does not state that water can be saved.” (Female hotel guest, 40-50 years, translated by the author)

Other participants also perceive the message as too boring and too educational. In contrast, other guests pointed out that they prefer such a brief and precise note. In their opinions this short text is easier to understand than longer ones, while at the same time containing sufficient information. Overall, two participants ranked the message as their favourite one.

Message 2

Participants perceived the message as clear and easy to understand. Further, many value the shortness of the message. According to participants, the text does not contain too much detail, but is straight to the point while getting the message across. One participant explicitly stated that the message length is good for people on holidays. He pointed out that shortness is important, because guests do not want to read too much educational information. In contrast, two other participants stressed that the text could be too long for tourists. However, they both selected the message as their favourite one. Most of the interviewees perceived the text as very meaningful and more informative than the first one, because it actually states the environmental impact. Especially the given feedback was highly appreciated by guests. One participant stated that people’s behaviour is obviously wasteful during holidays, as one does not need that much water at home. Many people mentioned that the information about the water consumption is very interesting, since they have not known that before. It was new information to them as the following statement illustrates:

“That is fascinating. I did not know that before. You realize, after reading, how much water you actually consume. Usually you are not really aware of the impact.” (Female hotel guest, 50-60 years, translated by the author)

Two participants emphasise that the detail about six litre of saved water is especially important to them. In contrast, there was one participant who appreciated the information about the six litres, but who did not like the 50 percent more consumption. He stated that this information is too much for tourists and that the excessive consumption during holidays should not be pointed out to guests. He justifies it with the reason that he does not want to deal with this kind of problem during holidays. A male participant stated that he can imagine that especially German people like the message, because it illustrates the impact of the behaviour in a tangible way. In his opinion the numbers are important as they make the impact visible. Another participant summarises the reaction of many participants quite well:

“So much water can be saved, wow. That is nowadays essential. I like these numbers, interesting. Usually, you are not really aware of the concrete impact, because you do not

think about it. When you have less laundry, it also saves chemicals. That's really good.”
(Female hotel guest, 50-60 years, translated by the author)

Another woman liked the slogan “Every towel counts”, because it indicates that an individual can have an impact. One interviewee wondered whether the fact about the 50 percent more consumption is true. He doubted the number and noticed that it probably depends on the region. In this line of thought, another participant mentioned that he does not consume more water during the holidays than at home, because he does the same things during the holidays. Another guests' stated – after reading the message – that he reuses towels. Overall, nine participants ranked the message as their favourite one.

Message 3

Four participants found the message interesting, because of the stated feedback about the accumulated impact. According to them, the numbers illustrate how much water is used and how much water can be saved and, therefore, increase the awareness about the environmental impact. In contrast, other guests stated that the information of the message is not appealing to them. Two other participants declared that the part with the six litres is only interesting to them. This information is sufficient to them and not too long as a man stated:

“The 450.000l does not matter to me. It is enough to know that you save water, the six litres per towel are better in my eyes. It is shorter and thus easier to understand; this number is more interesting for an individual person.” (Male hotel guest, 50-60 years, translated by the author)

The opinion goes in line with the perception of half the participants. Many stated that the numbers are too big and the overall message too long and too much for the reader. One guest predicted that nobody would read this long text. Further problems arose with the understanding of the content. Some participants stated that the first part of the message was not specific enough. They were not sure, for example, if the hotel or the whole island is the one saving that much water. Another woman stated that the slogan (‘Be part of it’) is unclear for the reader. She said:

“I do not like the slogan: be part of it? Of what? As a reader it is not clear to me of what I can be a part. People will not understand it.” (Female hotel guest, 40-50 years)

The majority of the participants had no problems with the understanding though. Overall, two participants voted as their favourite.

Message 4

Message four caused different reactions. While one participant found it interesting, two others found it decent as one man said:

“The message is alright. It brings it to the point. One does not have to change the towel every day during holidays. You also do not do it at home.” (Male hotel guest, 60-70 years, translated by the author)

Another man liked the message, because he can compare himself with others and further can see that he behaves like the majority. The message caused a participant to state that he and his wife belong to the 80 percent, as they reuse their towels. However, half of the participants associated negative impressions with the text. According to most of the guests, the message gives one a bad conscious when one does not belong to the 80 percent.

Additionally a woman stated that nobody cares about what other people do. Another participant reacted as follow:

“I do not like that message. I am not interested what other guests do: if they reuse the towel or not. It is my personal decision. Nobody likes to compare oneself with others. The individual aspect gets lost here.” (Male hotel guest, 50-60 years, translated by the author)

Another woman declared that the message evokes the impression that guests would use towels from others and she stated that nobody wants to have that feeling of common use. One man acknowledged that the message might make the people reuse the towel; however in his eyes it would simultaneously evoke negative emotions. Another participant also reacted annoyed:

“The 80 percent does not seem credible to me. I think that less than 80 percent of guests reuse their towels. Nonetheless, the housekeeping employees change the towels anyway, although it has not been indicated. I do not like it. They should follow the instruction from guests when they have such signs.” (Male hotel guest, 50-60 years, translated by the author)

Overall, participants had no problems with understanding the message, but nobody voted the message as their favourite one.

Message 5

The reaction to message five were quite controversy. Four participants liked the message, because of the idea of donating money. One of them stated that he likes especially the WWF, as they stand up for animal rights. In contrast, other participants did not like the message. One of them mentioned that not the donation is important, but the decrease in water consumption, as it is good for the hotel and the overall island. Other guests had a negative attitude towards donations or did not like the WWF as one man stated:

“Donating does not matter for me. In fact, I also do not like the WWF. In our neighbourhood back home we had bad experience with the WWF.” (Female hotel guest, 50-60 years, translated by the author)

Other participants had also divided opinions about donations. One woman stated that she believes that people would like that the hotel donates money, but for personally, she would prefer another organisation than the WWF. For her it would be more appealing when the money would be donated to a local project or a school. Another woman also stated that she does not like the WWF and would prefer that the money would be given to children in low-income countries. However, she was generally sceptical about donations, as one never knows if the money actually reaches the target group. Another man was also had a divided opinion about the message:

“I can imagine that the people would like the message, but that in the end they would not care. It would not make a difference. I think that they do not want to deal with such a thing during their holiday.” (Male hotel guest, 50-60 years, translated by the author)

In contrast, another female participant pointed out that donations are a good idea, as the guests get an indirect reward for reusing towels and supporting the hotel. When it comes to

the understanding of the message, a woman mentioned that she did not like the wording, as the text is too long and the slogan inappropriate. Additionally, some participants perceived the message as information overload and thus not easy to understand. Then again another interviewee stated that the text is too unspecific, as the reader does not understand who exactly donates the money. He further mentioned that the numbers about laundry-savings are not credible. In contrast, a man thought that the message is brief and clear. Generally, the majority of the participants understood the instructions. Overall, four people voted message five as their favourite one.

Message 6

Message six also provoked different perceptions. Some participants thought that it is a nice gesture to give guest in the end of the stay a chocolate bar as appreciation. One man stated that he likes chocolate in general very much, while another guest mentioned that the chocolate should be fair trade. Then again another participant said that the chocolate with the text is a good idea, as it is important to be reminded about protecting the environment. He further suggested writing on the chocolate bar how much water was saved and how many Euros were donated to the WWF due to guests' behaviour. In his opinion that would make guests flattered. Another participant mentioned that the chocolate is a nice idea, but it would not impact his behaviour. However, half the interviewees perceive the give-away negative due to different reasons. Many stated that chocolate would solely produce more paper and in turn more waste. Hence, it would be inconsistent with the overall environmental friendly approach of the hotel. Additionally, it was stated that there is enough food in the hotel and thus there is no need for extra food. A woman summarises this point of view as follow:

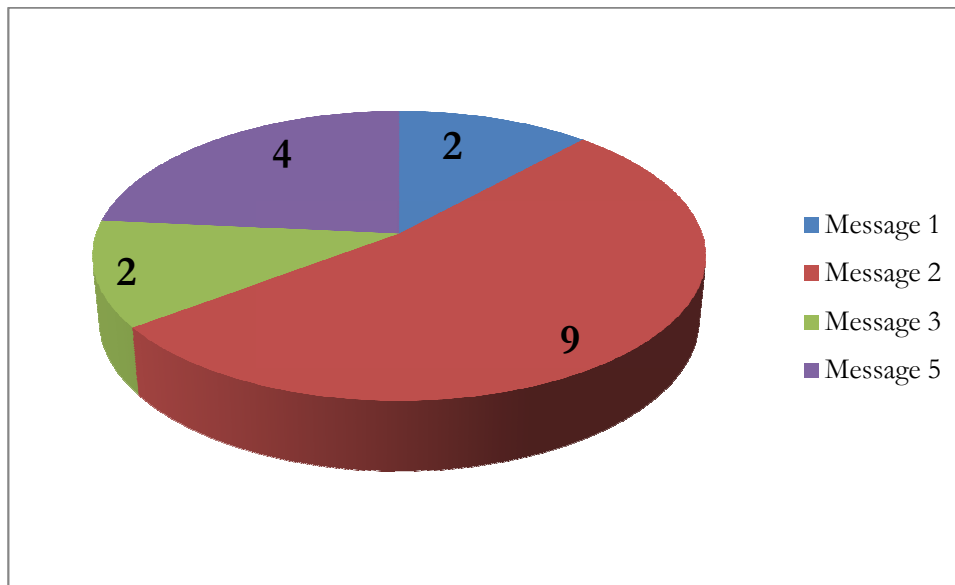
“I do not think it is a good idea to give people chocolate. More garbage is produced! Either way you want to protect the environment and act sustainable or not; the hotel has to be consistent. And there is also a really good buffet, no need for extra food.” (Female hotel guest, 50-60 years, translated by the author)

Two other participants pointed out that it would make more sense to give the chocolate bar at the beginning of the stay as a reward to guests, as people would then think more about their behaviour. Another woman stated that she does not like candy, so the give-away is not important to her.

Figure 6 illustrates the overall result of the interviewees' favourite messages. In summary, the majority of participants voted for message two.

Comments

During the interview some discussions came up. One third of the participants stated once more that it is not necessary to have a new towel every day, because at home they also use towels for several days. Further it was pointed out that using a new towel every day solely causes more laundry and consequently lead to higher water consumption. A woman mentioned that – as at home – it is enough to have the small towel changed on a regular basis. Another participant pointed out that the housekeeping employees change towels anyway despite guest's instructions. Another man highlighted that he prefers towel programmes, as they enable guests to choose on their own whether they want to protect the environment or not. All these findings support the results of the exploratory interviews.

Figure 6: Total numbers of votes of participants' favourite message¹

Source: Developed by the author

4.4.2 Findings of interviews about different design options

The results from the interviews about the messages had revealed a favourite one (message two), which was visualised in six different ways (described in appendix 3). The next step of the social marketing process involved gaining feedback about different designs to identify the most appealing one and to further re-assure that the message is understandable for guests.

Design 1-3

Guests' perceptions with regard to the first two design options were controversial. Some participants stated that they associate green as well as trees and plants with environmental protection. Additionally, one interviewee linked plants with water as plants need it for growing. Therefore, in the eyes of these participants, the green designs fit the message. In contrast, some other guests did not like the green visualisations, as they do not see a clear link between green and water conservation. Thus, for some interviewees design one and two were not appealing at all. Overall, only two participants voted the first design as their favourite one. Design three had also controversial reactions. While the majority of the participants perceived the card as too boring and thus not appealing, one man stated that for him - as an engineer - the facts are more important and thus design number three is his favourite one. However, most of the guests thought that the design is unsuitable, as it is too much text with no pictures.

Design 4

Design four was perceived positive by a number of participants. Many stated that they prefer the colour blue, as it fits better the theme of the message. With blue they associate water or the sea. Half of the participants liked the heart-picture, while two men perceived the picture

¹ The total number of 17 is due to two interviews where an attendance voted for his/her favourite message as well.

negative. Guests had different perceptions with the image. One woman associated a swan with the picture. The swan reminded her about typical pictures of hotels, where towels are folded as a swan. Another man stated that the design matches his situation very well, as he just got married. A woman perceived the heart as a symbol of appreciation to guests since they help the hotel to protect the environment. The visualisation of the six litres which can be saved when a hotel is reused was perceived as positive by the majority of participants. It was pointed out that the image nicely illustrates the water consumption. Another man stated that the visualisation is good, as guests can understand the message without reading the text. A female participant agreed on that as she said:

“I like the visualisation of the six litres. It is an eye-catcher and you get every day reminded about the consumption. Once you have read the message, you usually see only the picture. You do not have to read the text again.” (Female hotel guest, 40-50 years, translated by the author)

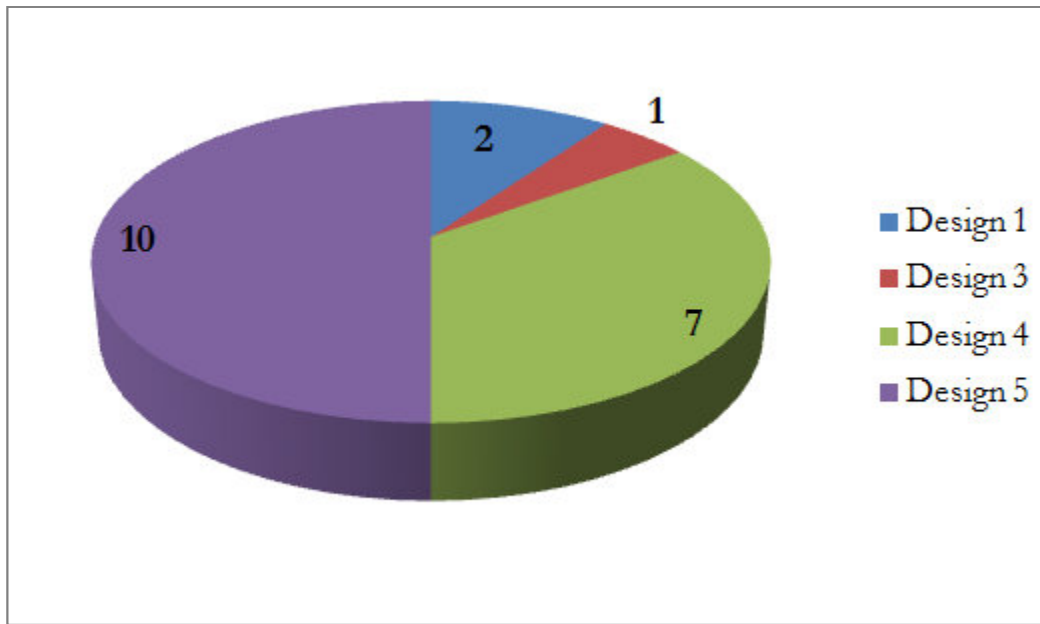
In contrast, a man did not like the visualisation, as he perceived it as cheap. Another participant stated that the image is not needed. Overall, seven people voted the design number four as their favourite one.

Design 5

Design five was perceived very positive by guests. Many participants liked the picture very much, as they associate water with blue and with bubbles. One woman stated that she further relates life with water. Some participants pointed out that the visualisation of the six litres which can be saved when one reuses a towel once should be combined with design five. A woman mentioned that this image induces a great psychological effect, as it reminds people about the content of the message. According to her, pictures are more likely to stay in peoples' memory. However, the design with solely text was more appealing to her. One male participant in addition stated that the 6l-visualisation would be too much for him, as the text is already communicating this message. Overall, ten interviewees voted design five as their favourite one, which is overall also the majority as figure 7 illustrates.

Comments

Many participants stated that the message is good. They perceived it as interesting and easy to understand. While many interviewees liked the six litres visualisation, a male participant perceived it as negative, as it gives guests a bad conscious in his opinion. Overall, many subjects arose during the interview, which were similar to the findings from the previous interviews. These findings include that people do not use a new towel every day at home. Hence, the participants feel no need for this luxury during their holidays. Further it was mentioned that towel cards are nowadays standard in hotels, that the signs allow guests to decide on their own when they would like new ones and that housekeeping employees sometimes change the towels anyway although it has not been indicated. Thus, hotel employees should comply with given instructions. On the other hand, participants pointed out that they want to have towels changed - although it has not been indicated - under the condition that the towels are dirty. Overall, people appreciated towel reuse programmes, but half of the participants stated that they have not noticed the signs in the hotel or that they have noticed the cards late. These results all re-confirm findings of the previous interviews (see chapter 4.2.2 and 4.4.1).

Figure 7: Total numbers of votes of participants' favourite design²³

Source: Developed by the author

4.4.3 Analysis of the interviews

The following analysis of the interviews is based on different dimensions of knowledge outlined by van der Linden (2014). These dimensions include factual, procedural and effectiveness knowledge as described in chapter 3.3.

Message 1

The results show that participants know what message one is suppose to communicate and that guests are aware of the course of action (i.e. 'Do not want to use your towel again? Put it on the floor and we will replace it.'). Further, guests appreciate the shortness of the text, which is an important element with regard to understanding a message (cf. Manning, 2009). Hence, the findings of the interviews demonstrate that message one includes factual and procedural knowledge (cf. van der Linden, 2014). However, the outcome also reveals that the effectiveness of guests' action on the environment is only partly addressed in the message. Indications are participants' comment about the content: some pointed out that the message is not very informative, as it does not say anything about the concrete environmental impact and how peoples' action would influence the environment. As a result, many participants found the message boring, which is counterproductive for effective communication (Luca & Suggs, 2010; van der Linden, 2014).

Message 2

The findings further show that message two also includes factual and procedural knowledge and is consequently easily understandable for guests. However, two outliers indicated that they perceive the factual knowledge - the 50 percent more consumption - as unreliable. This perception about a not credible content can limit the desired outcome of the communicated

² See appendix 3 for the different designs

³ The total number of 20 is due to the fact that some people voted more than one as their favourite

message as Paschke et al. (2002) and Shang et al. (2010) proved. Nevertheless, the majority of participants appreciate the shortness of the message, while at the same time highly value the significance of the message. The findings show that guests especially fancy the effectiveness knowledge about their course of action when they would reuse a towel (the six litres of water which can be saved). Thus, the third dimension of knowledge is also addressed in message two (cf. Van der Linden, 2014). Overall, the message was perceived as positive by the majority of people; only one participant reacted negative to the 50 percent more consumption.

Message 3

The results revealed that message three does not meet all criteria by van der Linden (2014). On one hand, the procedural knowledge (course of action) was clear to the participants. On the other hand, the findings show that people had issues with understanding the other two dimensions of knowledge. Firstly, they perceive the message as too long and thus not easy to grasp. Many stated that the fact about the six litres would be sufficient and that the other numbers are redundant. Other statements show that some participants perceive the message as too unspecific. They pointed out that it is not clear to them who exactly saved that much laundry. These factors (too long, unspecific) both decrease the likelihood for an effective communication (cf. Manning, 2009; McKenzie-Mohr, 2011) and further illustrate that the factual and effectiveness knowledge dimensions are inadequately addressed.

Message 4

Looking at message four, the findings show that participants had no issues with understanding the factual and procedural knowledge dimensions by van der Linden. However, there is no information about the effectiveness of the course of action in message four. This dimension is completely missing, as the message solely communicates the participation reuse rate of the programme. However, there is no information with regard to the environmental impact. Additionally, the main problem with message four is the negative reactions it evoked among many participants. The findings indicate that people felt the group pressure of the declared social norm in the text. However, in the eyes of participants, they do not want to compare themselves with others. Guests further stated that the message would give people a bad conscious when they would not reuse the towels. This negative reaction is counterproductive for effective communication (cf. Luca & Suggs, 2010; van der Linden, 2014) and further can damage the hotels' reputation.

Message 5

Message five addresses only some elements of the three knowledge dimensions. The procedural knowledge is understandable as all participants stated that they are aware of the course of action (i.e. 'Do not want to use your towel again? Put it on the floor and we will replace it.') (cf. van der Linden, 2014). However, while some guests found the message brief and clear, others pointed out that the message is too long and consequently not so easy to grasp. Further, some participants perceive the message too unspecific. They were not sure who exactly will donate the money or what the slogan ('Be part of it') refers to. Additionally, the reliability of the factual knowledge was questioned by the participants. Some participants stated that the declared numbers on the sign seem too big. The issues with the general understanding of the message, the perceived information overload and the implausible content of the message indicate a lack of the factual knowledge (cf. Manning, 2009; McKenzie-Mohr, 2011; Paschke et al., 2002). Further, the effectiveness of an individual course of action is not directly stated in the message. It is declared how much laundry was saved last year, but people do not learn how many towels need to be reused to donate one euro (i.e. how many towels constitute one kilogramme). Moreover, they do not learn about

the environmental impact of using a new towel every day. Another problem with the message is that donations evoked contrasting perceptions. Some participants stated that one does not know for sure whether donations reach the target group, other participants did not like the World Wide Fund (WWF). While many guests appreciated the indirect reward in form of donations, some other guests would like that the hotel donates money to other projects. The findings indicate that it is not easy to find a suitable charity for everyone. It is, therefore, possible that the message does not lead to the desired behaviour among guests, as some might not like the chosen charity. As a result, the message can be perceived negatively or the donation might miss its function as reward (cf. Gardner & Stern, 1996; Teng et al. 2012).

Interestingly, one of the participants pointed out that not donations are important, but the decrease in water consumption. It is also notable that not many people have voted message five as their favourite one although they like the idea. These findings suggest that for the participants (indirect) incentives are not effective to trigger behaviour change among hotel guests. According to Gardner & Stern (1996), incentive work best when motivation is low. However, the findings show that the participants are not much interested in incentives. This can be an indication that the motivation among participants is high. Hence, they do not need rewards for their behaviour.

Message 6

For message six it is only possible to check the general perception of the give-away, as the message does not include procedural knowledge or effectiveness knowledge. The reaction to the give-away was controversy. Firstly, some people stated that they do not like candy or chocolate, which indicates that it is not easy to find a mutually appreciated reward for guests. Consequently, the give-away can miss its function as incentive (cf. Gardner & Stern, 1996; Teng et al. 2012). Moreover, the majority of participants perceived the give-away as inconsistent behaviour of the hotel, as give-aways produce more waste. This is contrary to the hotels' alleged pursuit of environmental-friendly behaviour. Thus, the give-away decreased the credibility of towel programmes among guests, counteracting the effective inducement of behaviour (Inoue & Kent, 2013).

Table 10 outlines the outcome of the message analysis. In summary, message two was the only one who met all knowledge criteria outlined by van der Linden (2014). Interestingly, it was also voted as the favourite one among participants.

Design

Overall, the findings show that the majority of participants preferred the blue design options over the green one, as they associate water with it. In their opinion, a blue design thus matches better with the content of the message. Additionally, the findings clearly show that designs with coloured pictures and visualisations are more appealing to participants than plain ones. This confirms that cards with visual designs are better in catching peoples' interest (cf. Bell, Greene, Fisher, & Baum, 1996; Manning, 2009; Thaler & Sunstein, 2008). However, the various images generated different reaction. While the picture with water forming a heart was appealing to many women, some man perceived it negatively. The picture with water bubbles, on the other hand, were perceived as positive by both group and was voted by the majority as their favourite one. Many participants also pointed out that they like the visualisation of the six litres of water that can be saved when a towel is hang (reused). The findings show that the visualisation made the feedback more tangible to guests. As a result, for the following field experiment the most popular design (number five: bubbles) was

combined with the image of the hanging towel. The design option described in appendix 6 was used for the intervention.

Table 10: Overview of the outcome of the analysis that examined whether the messages exhibit all three dimensions of knowledge outlined by van der Linden, 2014

Message	Factual knowledge	Procedural knowledge	Effectiveness knowledge	Overall reaction
1	Addressed	Addressed	Partly addressed	Neutral
2	Addressed	Addressed	Addressed	Mostly positive
3	Partly addressed	Addressed	Partly addressed	Controversial
4	Addressed	Addressed	Not addressed	Mostly negative
5	Partly addressed	Addressed	Not addressed	Controversial
6	Not applicable	Not applicable	Not applicable	Mostly negative

Source: Developed by the author

Comments

Other comments during the interviews revealed that majority of participants perceive the message as interesting and easy to understand and many appreciated the feedback. Interestingly, many similar points were mentioned from the interviews before. For example participants have not notice the signs in the hotel and that employees change the towels anyway although it has not been indicated by guests. The results confirm the findings from the (exploratory) interviews before and, therefore, increase the overall internal validity of the study.

4.4.4 Findings of the field experiment

The next chapter describes the outcome of the experiment. The final intervention was set up as described in chapter 3.2.4 and 4.3. The most popular sign, being identified during the interviews, was used to communicate the towel programme to guests (see appendix 6). It was expected that the request rates for towels of the experimental group is lower than the request rate of the control group. Two rooms had to be taken out of the sample, because data were missing. Hence, it left the study to a sample size of n=18 rooms. One to two guests stayed in one room. So, on average 36 people were observed.⁴

The *total* number of towels requested within the two week period was 287 for large towels and 295 for small ones. During the same time period the hotel had a total of 459 overnight stays in these rooms. These numbers correspond with a mean of 0.63 (large towels) and 0.64

⁴ Over the time period the guests of the hotel rooms changed and thus there is no absolut number of observed guests.

(small towels) requests per guest per day. The numbers show that demand for small and large towels was almost identical. The average request rate of all rooms was 63 percent for large towels and 64 percent for small towels.

In the *control group*, the total number of towels requested was 164 for large towels and 163 for small towels. This corresponds with a mean of 0.67 requested large towels and 0.66 requested small towels per day per guest. Overall, the average request rate in the control group was 67 percent for the large towels and 66 percent for small towels. These numbers show that the demand by guests of the control group were slightly higher than the average demand. In the *experimental group*, the total number of towels requested was 123 for large towels and 132 for small towels. The calculated mean per day per guest accounted for 0.58 (large towels) and 0.61 (small towels). Hence, the average request rate was 58 percent for large towels and 62 percent for small towels. Interestingly, a difference in demand of small towels and large towels can be observed in the experiment group.

The outcome is summarised in table 11. The results demonstrate that there was overall a higher request rate by the control group. Small towels were requested on average four percentage points more by the control group and large towels were requested on average nine percentage points more. The difference of total numbers of towels requested was 41 for large towels and 31 for small towels. Although one has to be careful with the results, as the sample size did not have statistical validity, the hypothesis is accepted. As expected, the experimental group had a lower request rate for towels. It is notable, though, that the intervention worked much better for large towels (difference of nine percentage points against four percentage points). These results are discussed in more detail in the next chapter.

Table 11: Results of the experiment (in total numbers and request rates)

Towels	Control group		Experimental group		Difference	
	Large	Small	Large	Small	Large	Small
Total numbers of requested towels	164	163	123	132	41 less in experiment	31 less in experiment
Mean request per day (in numbers)	0.67	0.66	0.58	0.61	0.09 less in experiment	0.04 less in experiment
Average towel request rate (in percent)	67%	66%	58%	62%	9 percentage points less in experiment	4 percentage points less in experiment

Source: Developed by the author

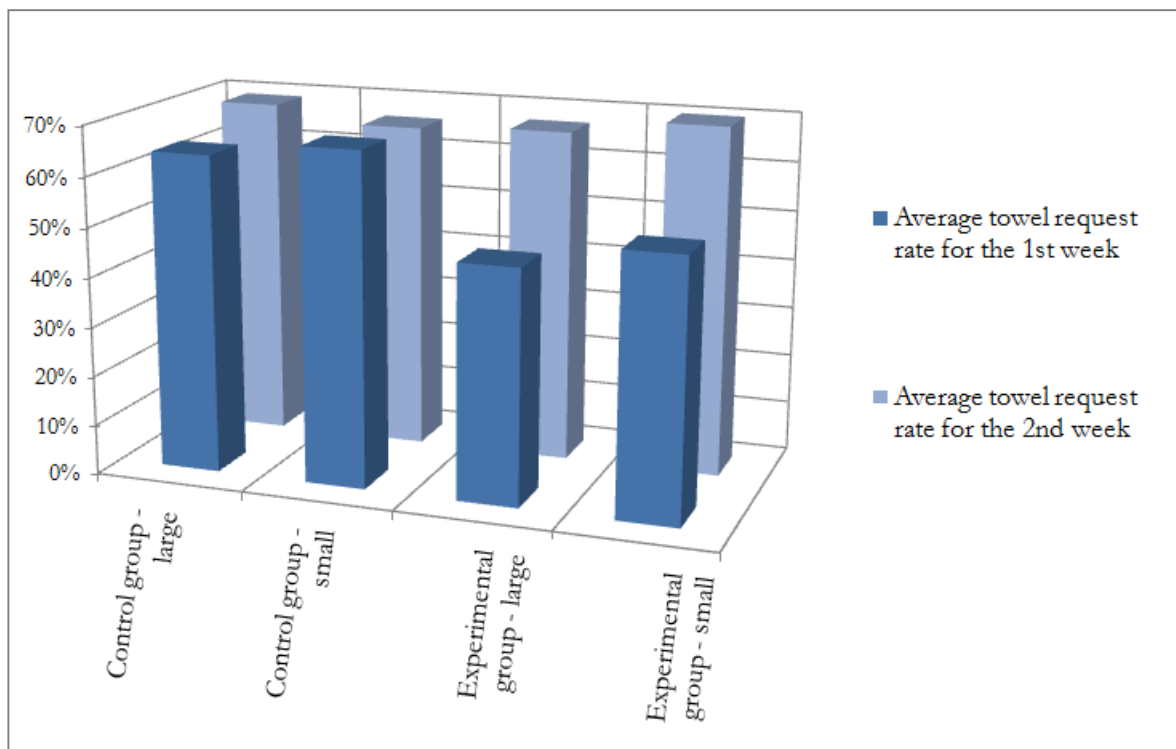
Comparison of week one and week two

Figure 8 shows the towel request rates divided by week. It can be seen that a huge discrepancy between the control and experimental group within the first week exists (first row – dark blue columns). While the control group had a request rate of 64 percent for large

towels and 67 percent for small towels; the experimental group had a request rate of only 47 percent for large towels and 52 percent for small towels. Thus, overall the large towels were requested 17 percentage points less (small towels: 15 percentage points less) in the experimental group within the first week.

However, looking at the second week, there is only a slightly difference of the request rate between control and experimental group. While in the control group the request rate was 69 percent (large towels) and 66 percent (small towels), within the experimental group the request rate was 67 percent (large towels) and 70 percent (small towels). Hence, the demand for large towels is only 2 percentage points lower in the experimental group. The demand for small towels was even higher in the experimental group than in the control group (4 percentage points). In summary, the results illustrate that the intervention was more effective during the first week than during the second week. A possible explanation can be the weather. In week one the average temperature was 30°C, while in week two the average temperature was 35°C. Further research is needed in order to determine whether there is a correlation between these variables.

Figure 8: Comparison of the request rate of the first and second week



Source: Developed by the author

5 Reflection on effectiveness of social marketing

This chapter discusses the effectiveness of the social marketing intervention and reflects on the still present value-action gap, on social marketing as method, and on social marketing in the tourism context.

5.1 Internal comparison of findings - reflection on value-action gap

The exploratory interviews and the study by Gössling (unpublished) showed that a clear majority (over 80 percent) of guests are willing to reuse their towels. However, the compliance rates from the control group in the experiment revealed that only 33 percent (large towels) and respectively 34 percent (small towels) of guests currently reuse towels. First, it is notable that the rate of reuse is higher than was estimated by the head of housekeeping. The rate of reuse estimated by the head of housekeeping was approximately 20 percent, while the towel reuse rate of the control group was over 30 percent. Secondly, the results clearly show a value-action gap of approximately 45 percent without the intervention. However, even after the social marketing intervention, where potential barriers were addressed that could have hindered engagement, the towel reuse rates were 38 percent (large towels) and respectively 40 percent (small towels). Although this is an overall increase of the compliance rate, the measured towel reuse rate of the intervention is just half of the stated by guests. The next paragraph reflects, therefore, on this evident value-action gap and on the effectiveness of the intervention.

Interestingly, the social marketing intervention of the present study worked particularly for large towels. Table 11 illustrates that within the control group the towel reuse rate for large and small towels were almost the same (33 and 34 percent). However, after the intervention, the rates for large towels increased by eight percentage points, while for small towels the rate only rose by 4 percentage points. Thus, for large towels the intervention worked more effectively. One reason can be found in the exploratory interviews. The results have shown that some guests would like to have the small towel changed on a daily basis (cf. chapter 4.4). Therefore, the difference can be explained by peoples' attitude towards the usage of small towels. They do not seem to be willing to give up this holiday luxury. In addition, it might be that guests do not perceive the washing of small towels as particularly bad for the environment, as they are just one third of the size of large towels. Therefore, small towels do not consume as much water, chemicals etc. as large towels. Further research is needed to find out why the intervention was not working better for large towels.

One reasons of the modest increase of the towel reuse rate might be the demographic profile of guests. The interviews indicated that most of the guests are highly educated (i.e. university education) and that they were aware of the different facets of environmental pollution and degradation of washing large amounts of towels. Research has shown though that education and environmental knowledge is more likely to lead to pro-environmental behaviour (Kollmuss & Agyeman, 2002). This could be an explanation why the intervention did not have such a large impact, as it might have added only little value to guests' natural behaviour. Further research is necessary to examine whether the intervention would be more effective on other guest segments, such as guests with lower education.

Additionally insights on the value-action gap can be gained by looking at the perceived barriers, which the intervention discovered and aimed to approach. The first barrier was the non-compliance behaviour of housekeeping employees. Hotel employees often change

towels although it was not requested by guests. As a result, the towel programme of the hotel was perceived as incredible to some guests. Thorough training is necessary in the future to change housekeeping employees' attitude and to make them comply with guests requests. Prior to the intervention in the present study, housekeeping employees received detailed instructions to change only towels, which lay on the floor. Hence, the non-compliance barrier was addressed. However, it might be possible that guests' behaviour was influenced by past experiences from other hotels. As many interviewees mentioned during the interviews, towel programmes are an industry standard. This indicates that some guests have already experienced similar programmes where housekeeping employees might have replaced towels that were hung for reuse. Past experience have been shown to influence behaviour (Peattie, 2010). As a result, guests could have generalised these experiences to other hotels and, therefore, perceived the towel programme of the current hotel as unreliable (cf. Inoue & Kent, 2013).

Another identified barrier were ongoing activities in the hotel consuming large amounts of water. These activities further decreased the credibility of the towel programme. The hotel of the present study has already started to work on different technical and managerial measures with regard to water savings. The measures have been recommended by an external consultant the year before the social marketing intervention took place. However, technical measures often need some time to be implemented, as they are time-consuming and costly. Moreover, they are an ongoing process as new technologies arise. The realisation of some water saving activities had not been finished at the time of the intervention. Consequently, guests might have perceived the credibility of the towel programme as low and disregard the instructions. An additional pilot study is recommended to find out whether compliance rates of the towel programme would further increase after other measures have been implemented.

Another problem, which could have caused the value-action gap during the intervention, is the rebound-effect. Although the majority of the guests have stated that they are willing to reuse towels, around 20 percent insisted on getting a new towel every day. The intervention might have compounded this undesired behaviour. When this group of guests have not notice the signs before the intervention, they would not have known for sure that towels will be replaced. Therefore, they might have kept their towels on the hangers. However, the new location of the sign is easier to notice and clearly shows guests that the hotel has a towel programme implemented and that towels on the floor will be replaced. Thus, people who do want a new towel every day, have now the possibility to request new towels on a daily basis. This would consequently decrease the towel reuse rate of the intervention.

Moreover, during the intervention it could have been emphasised more on the benefits of the desired behaviour. As many participants mentioned, they perceive towel programmes as high quality service, as they can decide on their own when they want a new towel. This perceived benefit could have been integrated in the message on the sign (i.e. 'It is up to you' 'You can make your own decision'). This might have lead to an increase of the towel reuse rate. Within the present intervention, the decision was made in favour of a brief message and thus this perceived benefit was neglected in the message. An addition pilot study is necessary to test a message stating this identified benefit.

In summary, there is still room for improvement with regard to towel reuse rates and further pilot studies are necessary before the intervention can be implemented on a broad scale (stage five of the social marketing process). Further research opportunities are described in more detail in the next chapter.

Overall, the intervention did not have such a significant impact. It is questionable, therefore, whether social marketing is an advantageous solution to induce behaviour change in the tourism context. In addition, the kind of institution carrying out the intervention – a profit-oriented one – could have had an impact on the outcome. The next chapter reflects on these influences.

5.2 Reflection on social marketing as method

The following section reflects on the appropriateness of social marketing as method.

Application

The applicability of the social marketing approach was in many ways valuable, but the author faced also problems with the conceptual framework. The flexibility of the social marketing framework is generally advantageous, as it can be applied in many different contexts, but this characteristic causes also drawbacks. The application of the method illustrated in the present research that one shortcoming consists of the simplicity of the framework. Although the conceptual framework helped to structure the analysis of the study, the identification of the barriers and benefits as well as the cost of involvement factors were partially perceived to be hard by the author.

Barriers are very specific for each case and consequently can vary a lot. Michie et al. (2005) identified at least 33 psychological theories of behaviour, with over 130 theoretical constructs. This shows that it is potentially extremely difficult to have knowledge of every single one to identify the specific barriers and benefits of the desired behaviour. This issue is due to the simplicity of the framework (i.e. behavioural theories are not dealt in detail within the given framework) and it could lead to inaccuracy in the analysis. Especially internal barriers and cost of involvement factors are complex and additional theories or a thorough literature review is necessary – beyond the current social marketing framework – to understand and identify every barrier and benefit. Even though the social marketing mix is adapted to its purpose, issues with regard to identifying cost of involvement factors shows that the framework is still underdeveloped. Additionally, the current social marketing framework emphasises rather on the marketing and managerial realm than on behavioural science. Although social marketing academics acknowledges that different research fields, such as sociology, psychology, anthropology and communication theories, need to be combined in order to facilitate people's behaviour (cf. Gordon, McDermott, Stead, & Angus; 2006), these fields are lacking in the current framework. This finding goes in line with criticism by Rafiq & Ahmed (1995), who suggested that social marketing is not explicit enough to achieve sustainable behavioural change.

Outcome

The present study confirms – as Peattie and Peattie (2009) stated once – that it is very important to measure behavioural change instead of a general attitude or belief. The findings showed that the stated attitude of guests varied greatly from their actual behaviour. Looking at the outcome of the social marketing intervention, it also solely measured guests' behaviour, but not their awareness and attitude. Social marketing theory assumes that a successful intervention automatically includes a change of attitude, as it is a prerequisite for behavioural change (cf. Hall, 2014). However, due to social marketing's holistic approach, one cannot determine whether changed attitudes were responsible for triggering behavioural change or whether other factors were more influential (i.e. the new location of the sign). This result goes in line with criticism by Munro et al. (2007) who stated that measuring

effectiveness of social marketing is difficult, as various techniques are utilised in different cases. Therefore, one does not know which factor influenced the outcome of a social marketing intervention and whether peoples' attitude was changed. Nevertheless, for sustainable behavioural change, it is necessary to alter mindsets as well (Hall, 2014). It would thus be more valuable to conduct a comprehensive evaluation plan for an social marketing intervention, which is not solely focused on measuring behavioural change, but that evaluates changes of awareness and attitude as well.

In summary, the study showed that social marketing as method can be too simplistic in its current form to induce behavioural change. It is suggested, that the framework should be more adjusted and adapted to its specific purpose to achieve a significant impact on behavioural change.

5.3 Reflection on social marketing within the business and tourism context

The study has further shown that the application of social marketing in the business context is difficult. The main difference to a social marketing intervention in the public sector is that the organisation, carrying out the project, is a profit-oriented one. As the findings have revealed, social marketing campaigns conducted by a business can be perceived as greenwashing activity or solely grounded on financial reasons. However, credibility is one of the critical success factors for a social marketing intervention (Inoue & Kent, 2013). The outcome shows that to achieve a more significant impact on individuals' behaviour, companies - or in this case the hotels - have to ensure that people perceive the intervention as reliable. Guests need to believe that the company truly wants to support a social or environmental cause. Otherwise, people might not be willing to change their behaviour as they might not want to support a profit-seeking-organisation.

The study has additionally illustrated that establishing a credible environmental programme is challenging in the tourism context. Hotels live from luxury experiences and certain services, such as providing a pool, are expected by guests. However, many of these services consume large amounts of water, which undermines the credibility of sustainable activities of hotels. Nevertheless, technical or managerial measures can be applied in these services improving hotels' water footprint. It is hence recommended to communicate every environmental activity of the hotel to guests, i.e. the implementation of technical measures, to ensure that guests do not perceive a towel programme as green washing activity to the detriment of guests' service quality.

6 Comparative analysis

This chapter compares the results of the present research with outcome from other studies. First, the findings of the exploratory interviews are compared with other studies. Then, the outcome of the pilot study is contrasted with previous research.

6.1 Comparison of exploratory interviews with previous studies

From other studies, it is known that people do not transfer environmental-friendly practices from home into tourism context due to various reasons. At a first glance, it also seems that this behavioural pattern could be a psychological barrier of the social marketing intervention. Many participants stated that they do not want to get involved in environmental activities during their holidays. These results go in line with Dickcinsons et al. (2010) and Barrs et al. (2010) findings suggesting that holidays are off limits to sustainability. Further, the findings of the present study support Dickcinsons recommended awareness-attitude gap, which states that people are aware of the environmental impact, but do not transfer that knowledge into a favourable attitude for the environment during their holidays. The results additionally revealed that some participants forwarded the environmental responsibility towards the hotel. This is also concurrent with Dickcinsons et al. (2010) and Barrs et al. (2010) outcome. They pointed out that some people forward the responsibility to other actors.

Nevertheless, the results of the present study further show that people in general accept towel programmes in hotels, as they recognize it as an environmental-friendly activity. This goes in line with findings from other studies, which have also proven that towel programmes are widely accepted (cf. Paschke et al., 2002; Tixier, 2008). However, these results are in contrast to the above mentioned studies by Dickcinsons et al. (2010) and Barrs et al. (2010). The discrepancy stemmed, in part, from the different scopes of these studies. While Dickcinsons et al. (2010) and Barrs et al. looked into transport means and CO₂-emissions (i.e. flying), this study investigated the reuse of towels and nature conservation. The difference could also stem from different existing alternatives to the undesired behaviours. In the present study, the desired behaviour (reuse of towels) was easy accessible. Further, according to guests, the behaviour theoretically did not hamper their holiday experiences. Thus, reusing towels was a low involvement alternative to the undesired behaviour (using a new towel every day). In contrast, flying cannot be easily replaced by other alternatives providing the same comfort. Additionally, the findings of the present study show that reusing towels is a habitual behaviour. Many participants stated that they reuse their towels at home as well. The results are, in this regard, conform with findings from Maslin and Simmons (2005 cited Tixier, 2008) who revealed that certain behaviours - such as water savings - are habitual in nature and thus can be transferred to the tourism context.

The results additionally show that participants of the interviews are highly educated and that many were aware of the different facets of environmental pollution and degradation of the undesired behaviour. In fact, one of the main reasons to reuse towels was environmental protection. Hence, an absence of motivation among guests to reuse their towels did not seem to exist. In the studies by Dickcinsons et al. (2010) and Barrs et al. (2010) low motivation was a barrier for some people, as either they were not aware of the environmental impact of their actions or they did not believe in climate change (cf. Barr et al., 2010; Dickinson, 2010).

Moreover, findings of the present study reveal that the majority of the participants are willing to use their towels for more than one day. Paschke et al. (2002) and Gössling (unpublished) revealed same results. Guests' willingness to reuse towels was in all of these studies high.

6.2 Comparison of pilot study (qualitative interviews and experiment) with previous studies

The following chapter looks into other studies aiming to induce hotel guests to reuse their towels. The section further compares the outcomes of these studies with the findings of the present study. To make the comparison easier, the towel *reuse rate* of the experiment was calculated (instead of the currently calculated *request rate*). The control group of the experiment had an average towel reuse rate of 33 percent (large towels) and 34 percent (small towels). The experimental group, on the other hand, had a compliance rate of 42 percent for large towels and 38 percent for small towels as table 11 illustrates.

Looking at the table, it is notable that the average compliance rate of the control group is relatively high compared to other reported rates from hotels (cf. Cialdini 2005; Baca-Motes, 2013, Tixier, 2008). As mentioned in chapter 1.2.3, the towel reuse rates in other hotels vary enormously, but the upmost number was around 30 percent. The high towel reuse rate before the intervention in the present study could be due to the fact that hotel guests' are mainly highly educated. This factor could increase awareness about environmental issues and in turn the reuse rates. In addition, there seems generally to be a great understanding about environmental issues in many countries in Europe, where most of the guests come from. In comparison, other countries as the United States, where most of the other studies have been conducted, the awareness about environmental protection seems to be lower.

Comparing the compliance rates of other interventions with findings of the present study, it is noticeable that the social marketing approach had a modest impact in triggering reuse of towels. The study by Goldstein et al. (2008), using social norms, had an increase of 9 percentage points. The study reported a compliance rate of 35.1 percent for the control group (having a solely environmental protection related messages) and 44.1 percent for the experimental group (having a message addressing social norms). Evidence from a previous study by Baca-Motes et al. (2013) demonstrated that when guests made a brief visualised commitment statement at the beginning of their stay, the compliance rates of the towel programme increased as well. When the commitment was symbolised by guests through a lapel pin, the reuse rate increased from 24.4 percent up to 41 percent. This is a raise of 16.6 percentage points. It is notable though that the study was conducted among participants where "pins are highly valued by the majority of this hotel's guests, and wearing them is a tradition" (Baca-Motes et al., 2013, p.1072). Asking for such a public commitment in other hotels, might not have been that effective, as other people probably would not wear such lapel pins. The study additionally conducted an intervention where guests only made a written commitment at the beginning of their stay without a visualisation through lapel pin. The compliance rate was 31 percent under this condition, which was an increase of 6.6 percentage points. Table 12 summarises the different reuse rates of the studies.

Table 12: Comparison of reuse rates from different intervention

Study	Present study, 2014		Goldstein et al. 2008	Baca-Motes et al., 2013	
(Used theory)	(Social marketing incl. feedback)		(Social norms)	(Specific commitment)	
Control group reuse rate	33% (large)	34% (small)	35.1%	24.4%	
Experimental group reuse rate	42% (large)	38% (small)	44.1%	31% (only written commitment)	41% (written&public commitment through pins)
Change (in percentage points)	9	4	9	6.6	16.6

Source: Developed by the author based on Goldstein et al., 2008; Baca-Motes et al., 2013

Although, the study by Goldstein et al. (2008) revealed that social norms can have a significant positive influence on the towel reuse rate, findings of the present study showed that messages addressing social norms were perceived negatively by many hotel guests. This finding is consistent with the study by Shang et al. (2010) who also found out that people associate negative attributes with regard to messages with social norms. Therefore, the approach might be effective in triggering towel reuse, but it is counterproductive with the overall aim of a hotel to have happy, satisfied guests.

Looking at the perception of charitable donations, the study by Shang et al. (2010) showed that statements about it had a positive effect on people, as donations enhanced perceptions of value-driven motives of the hotel. These findings are similar to the results of the present study, as many guests perceived donations generally as a good idea. However, one guest stated that it would not influence his behaviour. Further many participants preferred other messages. That shows that participants of the present study are not that much interested in the fact that the hotel is financially benefiting from towel programmes. The reasons for this attitude could be that the guests place higher values on environmental protection. Further, opinions about the kind of charity varied strongly among participants in the present study. That shows that it is not easy to find a charity that everyone perceives as positive. This is an indication that the fit of charity can have an effect on compliance rates. In contrast, the findings by Shang et al. (2010) revealed that the fit of charity did not significantly affect participants' attitudes.

Looking at messages that include direct awards, the findings of the present study also vary from previous ones. In this research, some participants perceive the direct reward in form of chocolate as positive. However, many guests also associated negative attributes with chocolate, as it creates more waste. The findings by Shang et al. (2010), on the other hand, advocate that people place positive values on direct award in form of a reduced room rate. The conflicting results of the studies can be partly explained by taking note of the different types of reward. While the present study worked with non-monetary incentives, Shang et al. (2010) looked into monetary incentives.

7 Discussion

The next part discusses the generalizability of the study. It also reflects on the chosen research methods and the theoretical framework, and provides suggestions for further research.

7.1 Generalizability

The overarching research interest was to test a social-marketing approach to draw insights into how hotels can trigger water-saving behaviour of their guests. It needs to be acknowledged that only limited generalisations can be drawn from the analysis of the hotel in Greece as social marketing approaches' success is highly context-specific. Additionally, the limited generalizability of the study is due to the research method. A case study explores a single phenomenon in a specific context, with a limited sample. Hence, it is not possible to generalise from this one case study. For example, the relatively small sample size limits its representativeness. Moreover, the sample profile of the interviewees is also not representative. The researcher had little control over the cases within the sample and consequently the outcome of the study is influenced by the demographic profile of the participants (i.e. mostly highly educated, aged 50-60 years, European nationality) as well as the type of hotel (five star hotel). Therefore, the reliability of the findings is low and cannot be generalized to other settings.

Nevertheless, in hotels in the Mediterranean region with similar guest profiles, it is more likely that similar results would be obtained. Other tour operators, operating in the Mediterranean region, usually divide their hotels into different categories as well. For example, Thomas Cook has the 'SunPrime resorts', where the focus is solely on adults. For these hotels, having rather homogenous guest profiles that are similar to the guest profiles of the hotel in the present study, the reliability of the research is higher. In contrast, in other hotel categories as for example 'Smartline hotels' by Thomas Cook that are targeted at people and families with lower income, the research is likely to have different results. In addition, in different geographical or cultural context, the study outcome is expected to vary.

The internal validity of the interview analysis can be regarded as relatively high. This is due to the fact that the in-depth interviews provided detailed and rich information and consequently "the extent to which the research findings accurately reflect the phenomena under study" is high. Further, a triangulation of sources has been used to support all the main findings and arguments.

The results of the experiment might be generalizable to similar cases. However, external variables – such as weather conditions and water availability at the current location - might have influenced towel reuse among guests. Therefore, one has to be careful with the external validity. In addition, the researcher relied on housekeeping employees for data collection; hence, the measurements may be inaccurate. The sample size as well as experiment length was limited due to time and resource constraints. Consequently, one should be careful not to generalise the findings too broadly, and only tentative conclusions can be drawn from it. On the other hand, the study had a control group as well as a randomly assigned rooms, which strengthen the internal validity (Bryman, 2008, p.37). According to Bryman (2008, p.37), "randomization of experimental participants is crucial, as it means that the members of the different groups in the experiment are to all intents and purpose alike".

7.2 Reflection on chosen framework and research methods

The next section reflects on the chosen research methods and the applied theoretical framework.

Method

Surveys and focus groups are a possible alternative to gain insights of guests' perception of towel programmes as well as the various messages (cf. Bryman, 2008). However, surveys usually include closed questions and consequently do not offer such in-depth knowledge; they are constrained by predetermined answers (cf. Collis & Hussey, 2009). This contrasts the exploratory nature of the social marketing approach. As a result, a qualitative approach was chosen having a smaller sample size and thus less data, but having higher quality data. Surveys, due to its quantitative nature, would have resulted in more data sets, but lower quality having not much in-depth information.

With focus group, on the other hand, the answers of the people can be influenced by other attitudes and so called opinion-leaders. Consequently, the results can be unclear. Moreover, it was practically not possible to conduct focus groups due to given circumstances and language barriers. Firstly, the tourist context and hotel guests, which were necessary for data collection, constituted a barrier for focus groups, as the conduction of field research within a hotel is very sensitive. It would have been inappropriate and logistically very difficult to ask hotel guests to join a discussion group at a specific time. Secondly, language barriers constituted a barrier for focus groups, as some hotel employees speak only Greek. Under these circumstances it is not possible that a discussion arise, as either way it would have been disrupted by an interpreter or the author would not have the possibility to facilitate the conversation.

Framework

The study has revealed that social marketing, underpinned by positive feedback, can result in a positive increase in the rate of towel reuse. Nevertheless, the intervention had only a modest impact on guests' behaviour and revealed drawbacks in the application. Therefore, alternative approaches for behavioural change are considered in the next section.

In the past, it has been shown that other behavioural change theories, such as behavioural learning, solely communication or cognitive approaches - such as the belief model or the theory of planned behaviour - were not successful (cf. Hall, 2014). An alternative approach to induce behavioural change could be the 'Stage perspective' - also referred to as 'Stages of change' model. It involves various phases along the way to behaviour adaption and is - as social marketing - a comprehensive model involving various theories (cf. Hall, 2014; Andreasen, 2002). This transtheoretical model is mostly applied in the health sector, but is generally under-researched. Some advocates see it complementary to social marketing with regard to pursuing sustainable consumption (Hall, 2014).

The outcome of the study further illustrates that social marketing could be part of a comprehensive water-saving approach. The intervention acts directly at the consumer level and may contribute to a reduction in water consumption in Mediterranean resorts. Whilst it cannot replace interventions at a more strategic level, it can be valuable towards sustainable water consumption. This finding goes in line with Corner & Randall (2011) who acknowledge the important role of social marketing in encouraging public engagement. However, water management includes different levels of action, including government regulation, management practices, better technologies, and behavioural changes. In most

cases, a mix of intervention is more effective than a single one towards sustainable water management.

7.3 Further research

The next section discusses further research recommendations. As the analysis has shown, there are remaining knowledge gaps or uncertainties that require further research. First of all, the experiment needs to be conducted on a larger scale to validate the findings, as the sample size of the field experiment did not have statistical validity. This could be done as a single case study or as a comparative research across different hotels to find out if differences exist.

Secondly, further research is recommended to find out how the weather conditions influence the reuse rates of a towel programme. The results have suggested that there might be a specific temperature range where the intervention works more effectively. Comprehensive research is needed with a larger sample size in order to determine the correlation of the weather and the outcome of the intervention.

Moreover, due to the holistic approach of social marketing, one cannot determine which factors were most influential in inducing behavioural change (i.e. replacement of the sign or positive feedback about individual water consumption). Further research is suggested to examine the determining factors for a successful intervention.

Additionally, further pilot studies are necessary. Firstly, to determine if the compliance rates of the towel programme would increase after the remaining technical water saving measures have been implemented. Secondly, to find out to what extent people are willing to renounce hotel services, such as pools and gardens consuming high amounts of water. Reducing such activities can increase the credibility of the towel programmes and thus the compliance rates. Thirdly, to test if the perceived benefit of towel programmes – to decide on one's own when the towel is exchanged – would influence the outcome of the intervention.

The cost of implementing the technique has not been assessed against the benefits obtained, in terms of water saved, as a result of the intervention (i.e. how many litres saved versus the cost of the intervention). It is considered that, a further study could be undertaken to quantify whether the water savings are cost-effective in comparison to other water-saving intervention measures.

Finally, the interviews have revealed that the housekeeping employees face psychological barriers (i.e. the perception that guest expect a new towel every other day) when it comes to the proper implementation of the programme. In order to fundamentally change their attitude and behaviour, a separate social marketing intervention is necessary.

As the research approach was a case study, future research in this area could look into social marketing intervention in other countries. Regions with high water scarcity and high tourist demands might be of particular interest. Further, the environmental awareness among people is very likely to increase in the coming years, which might impact the outcome and which calls for a longitudinal approach.

8 Conclusions

Water scarcity is one of the environmental issues, which societies face nowadays. The Mediterranean region is one of the areas that is most heavily impacted by water scarcity. The tourist demand in this region, which is often focused on coastal areas and islands, further compounds the problem. Therefore, the present study aimed to investigate whether water consumption can be mitigated through a social-marketing approach. Various conclusions relevant for the improvement of towel programmes in hotels as well as social marketing within the tourism industry can be derived from the insights of the research presented in this paper.

The first subordinated objective was to identify perceived barriers to the guests, in terms of participating in a towel programme, and to develop a strategy that removes these identified barriers. The study finds that towel reuse programmes are widely accepted by hotel guests. However, three barriers are identified in regard to credibility and communication. The first barrier noted is that housekeeping staff do not always follow guest requests in respect to towel reuse. The second concerns other water-wasting activities. To improve the credibility of towel programmes, it is suggested for hotel managers that housekeeping employees are given training to follow strictly guests' requests. It is additionally necessary to reduce other water-wasting activities.

The third barrier is related to communication – i.e. the placement of individual signs in the bedroom regarding the programme to communicate the message to guests. To address this issue, it is firstly recommended to place signs at the point-of action in the bathroom. Secondly, research outcomes revealed that feedbacks about the individual water consumption as well as brief messages were highly appreciated by the guests. In contrast, statements about social norms and donations or give-aways may evoke negative reactions among participants. Therefore, it is suggested that hotels avoid such messages. The study further found that the design of signs can be optimized by adding colourful pictures and visualisations.

To conclude on the overarching objectives to examine whether social marketing is an effective method to increase the reuse rates of towel programmes in hotels, the research presented in this paper shows that social marketing was only partly effective in inducing behaviour change. The intervention had demonstrated that in the experimental group, where social marketing techniques were applied, towels were reused more than in the control group. To validate the findings, the experiment needs to be conducted on a larger scale though. The analysis further shows that guests' behaviour is complex, and that the modest result can be somewhat explained by various factors like past experiences and the tourism context. Overall, remaining knowledge gaps or uncertainties exist that require further research in order to investigate the still existing value-action gap, and to determine whether there is the potential to increase towel reuse more.

Moreover, the research finds that the application of social marketing in the hotel context is difficult, as there are other activities or offered services, which consume large amounts of water. As a result, social marketing campaigns conducted by a business can be perceived as solely grounded on financial reasons, which undermines the credibility of the towel reuse programme. Since credibility is an important factor for a successful intervention, it is recommended to communicate every environmental activity of the hotel to the guests, i.e. the implementation of technical measures, to ensure that guests do not perceive a towel programme as green washing activity. In addition, the research has shown that social marketing as method, although adapted, might be too simplistic in its current form for such a

multifaceted purpose as inducing behaviour change. It is suggested, for academics working on social marketing, that the framework should be more adjusted and adapted to its specific purpose.

In general, the study has revealed that social marketing, underpinned by positive feedback (such as recognising individual water consumption), can result in a positive increase in the rate of towel reuse. However, the case study was conducted in a five-star hotel with a specific guest profile (i.e. mostly highly educated, aged 50-60 years, European nationality). It is considered that the study is sensitive to all of these factors, and it is further taking into account that increased training with respect to water conservation amongst housekeeping staff as well as the communication of further water-saving measures could improve the effectiveness of the intervention.

Whilst the 45 percent value-action gap in terms of water consumption still remains, it is unlikely that it can be fully addressed by the use of social marketing. This technique could, however, form part of a comprehensive water-saving approach. The intervention acts directly at the consumer level and thus whilst it cannot replace interventions at a more strategic level, it may contribute to a reduction in water consumption in Mediterranean resorts. The change in water consumption was moderate, but multiplied across other similar hotels and resorts around the Mediterranean Sea; it could be a large impact in terms of litres saved. Therefore, it can be regarded as one small step towards a more sustainable tourist industry.

Overall, it needs to be noted that behavioural approaches are not sufficient to address environmental problems such as water scarcity. Water management includes different levels of action, such as government regulation, management practices and better technologies. A mix of intervention is necessary towards a more sustainable future.

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Appendices

Appendix 1: Question portfolio of exploratory interviews

Question portfolio of exploratory interviews with hotel employees

1. Since when have you a towel programme implemented here in the hotel?
2. Do you prefer the old or the new system?
3. What do you think about towel programmes?
4. What experience have you made with towel programmes?
5. What do guest have to do to participate in the programme?
6. How is it communicated to the guests?
7. How do guest react to the towel programmes?
8. How many use guest demand new towels?
9. What was the reason for the implementation of a towel programme?

Question portfolio of exploratory interviews with hotel guests

1. What do you think about environmental sustainability in hotels?
2. Should a hotel get engaged in environmental friendly activities?
3. What do you think about environmental friendly activities during holidays?
4. What kind of service do you expect in regard to towel exchange in hotels?
5. What do you think about towel programmes in hotels?
6. Should a hotel have a towel programme implemented?
7. Do you know how the hotel is handling towel exchange here?
8. Would you use your towel for more than a day?

Appendix 2: Participant profile of exploratory interviews

Number	Gender	Age group	Nationality	Travel partner
1	Male	50-59	German	Couple
2	Male	50-59	British	Couple
3	Male	60-69	German	Couple
4	Female	60-69	German	With friend
5	Female	30-39	Russian	Her mom and 2 small children
6	Male	40-49	Scottish	Couple
7	Female	30-39	German	Family with 2 young children
8	Female	50-59	Switzerland	
9	Female	30-39	German	Couple
10	Female	30-39	German	Couple

Appendix 3: Different design options of the sign

Design 1

- entire green background with trees and leaves
- message written in dark green letters
- hotel logo placed in left-hand corner at the bottom

Design 2

- white background with one branch hanging from the right corner at the top
- message written in light green
- hotel logo placed in the middle at the bottom

Design 3

- white background
- message written in blue
- hotel logo in the middle at the bottom
- little visualisation of “hanging towel = 6 Liter” at the right-hand side

Design 4

- white background
- a long picture of water forming a heart in the bottom half of the card
- message written in blue, placed in the upper half of the card
- hotel logo placed above the picture on the right bottom
- little visualisation of “hanging towel = 6 Liter”, in line with the text

Design 5

- light blue background: an entire picture of water with bubbles constitutes as background
- message written in dark blue, placed in the upper half of the card
- hotel logo placed in left-hand corner at the bottom

Appendix 4: Question portfolio of qualitative interviews (descriptive)

1. What do you think about towel programmes in hotels?
2. Have you noticed the sign in your room? How did you perceive it?
3. How do you like this message? How do you perceive the message?
4. What do you associate with the message?
5. Do you understand the message? What does the message communicate? Is it self-explanatory to you?
6. Which intention does the message have?
7. Does the message support you with your action?
8. Which message do you like best and why?

Appendix 5: Participant profile of qualitative interviews (descriptive)

Participant profile of qualitative interviews about messages

Number	Gender	Age group	Nationality	Travel partner
1	Male	50-59	German	Couple
2	Female	50-59	German	Unknown
3	Female	40-49	German	Family with child
4	Female	50-59	<i>English speaking</i>	Unknown
5	Male	50-59	<i>German speaking</i>	Couple
6	Male	50-59	Dutch	Couple
7	Male	50-59	<i>German speaking</i>	Couple
8	Male	50-59	German	Couple
9	Female	40-49	Russian	Unknown
10	Female	50-59	Austrian	Couple
11	Female/Male ⁵	50-59/10-19	German	Family with child
12	Female	50-59	<i>German speaking</i>	Female friends
13	Male	60-69	German	Couple
14	Male/Female	40-49	German	Couple
15	Female	50-59	German	Unknown

⁵The person written first was the main interview partner

Participant profile of qualitative interviews about card designs

Number	Gender	Age group	Nationality	Travel partner
1	Male	60-69	Belgian	Couple
2	Female	50-59	German	Unknown
3	Male/Female	50-59	German	Couple
4	Female	50-59/20-29	<i>German speaking</i>	Mom & daughter
5	Female/Male	30-39	<i>German speaking</i>	Family with child
6	Female	40-49	Swiss	Unknown
7	Female/Male	40-49	Unknown	Couple
8	Male	50-59	Unknown	Unknown
9	Female	40-49	German	Unknown
10	Male	20-29	Swiss	Couple
11	Female	60-69	German	Unknown
12	Female	40-49	German	Unknown
13	Male	60-69	German	Unknown
14	Male	50-59	Austrian	Couple
15	Female	40-49	<i>German speaking</i>	Couple
16	Male/Female	50-59	Germany	Couples

Appendix 6: Sign used for the experiment

- light blue background: an entire picture of water with bubbles constitutes as background
- message written in dark blue, placed in the upper half of the card
- hotel logo placed in left-hand corner at the bottom
- little visualisation of “hanging towel = 6 Liter” in the lower half of the picture