The Role of the Accommodation Sector in Sustainable Tourism
Case Study from Iceland

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60 ECTS thesis submitted in partial fulfilment of a
Magister Scientiarum degree in Environment and Natural Resources

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Abstract

The tourism industry is one of the world's most significant sources of economic outcomes and employment, and also a significant contributor to climate change. The accommodation sector is the fundamental component of tourism and is responsible for approximately 21% of the tourism-related CO_2 emissions. As a core tourism sector in the ecosystem services, accommodation establishments interfere with all types of tourism-related forms and concepts. Thus, accommodation establishments have the potential to spread the principles of sustainable tourism across the tourism industry by educating and encouraging their guests to take direct part in the sustainable progress of their chosen accommodation. This thesis assesses the relationship between guests' sustainable behaviour at home and while travelling, by analysing guests' rankings of sustainable practices. Using two sets of surveys, before and after travelling, the results show that the accommodation sector has the potential to positively influence its guests' behaviour towards more sustainable practices. The results of the accommodation sector's analysis in sustainable tourism are expected to provide important information for the development of future governmental policies. Additionally, the results offer a strong background for future research and provide the accommodation sector with practical sustainable indicators that can be applied to all accommodation establishments, regardless of their type.

Keywords:
Sustainability, sustainable tourism, accommodation, hostels, environment, impact

Útdráttur

Á heimsvísu gegnir ferðaþjónustan mikilvægu hlutverki í hagrænu tilliti og hvað atvinnusköpun varðar, auk þess sem hún hefur marktæk áhrif á loftslagsbreytingar. Gistiþjónusta er grundvallarþáttur innan ferðaþjónustunnar og er gistiþjónusta talin ábyrg fyrir 21% af útblæstri gróðurhúsalofttegunda sem tengdur er ferðaþjónustu. Innan þjónustu vistkerfa – og sem mikilvægur hluti ferðaþjónustu – þá tengist gistiaðstaða öllum gerðum að hugtökum og formum á sviði ferðaþjónustu. Þannig eiga gistiþjónustuaðilar möguleikann á því að breiða út meginreglur um sjálfbæra ferðaþjónustu innan atvinnugreinarinnar með því að mennta og hvetja gesti sína til að taka beinan þátt í aðgerðum innan gististaðanna sem lúta að sjálfbærri þróun. Ritgerð þessi metur sambandið milli sjálfbærrar hegðun gesta, heima fyrir og meðan þeir ferðast, með því að greina hvernig þeir meta tilteknar aðgerðir á sviði sjálfbærni. Niðurstöður úr tveimur mismunandi könnunum, þ.e. fyrir og eftir ferðalag, leiðir í ljós að gistiþjónusta á möguleika á að hafa jákvæð áhrif á hegðun gesta gagnvart sjálfbærari starfsháttum. Búist er við að niðurstöður greiningarinnar á gistiaðstöðu innan sjálfbærrar ferðaþjónustu veiti mikilvægar upplýsingar sem gagnast getur við þróun opinberrar stefnu á þessu sviði. Að auki leggja niðurstöðurnar grunn að frekari rannsóknum á þessu sviði, auk þess að sjá gistiþjónustunni fyrir hagnýtum mælikvörðum á sviði sjálfbærni sem nýta má af mismunandi tegundum gistiþjónustu, óháð því hvers eðlis hún er.

Efnisorð:
Sjálfbærni, sjálfbær ferðaþjónusta, gistiþjónusta, farfuglaheimili, umhverfi, áhrif

Dedication

To all those who contribute towards making this world a better place

Preface

My journey in Iceland started almost five years ago, in the spring of 2011, as a European Voluntary Service (EVS) volunteer in the project 'Green Hostels – Græn farfuglaheimili'. The project enabled me to serve for a cause I truly believe in: raising awareness about sustainability and responsible travelling among staff and guests staying at the Reykjavík HI Hostels. I am very grateful to have been offered the chance to continue working at HI Iceland after I ended my volunteering stage, as a Sustainability Coordinator and Project Manager and since 2013 as the Quality and Sustainability Manager of HI Iceland.

My learning curve in sustainability grew exponentially through the hands-on experience gained at the hostels, by experimenting different ways to reach out to staff and guests in practical materials and speeches. Pursuing the Master's Programme in Environment and Natural Resources at the University of Iceland allowed me to be part of an active scientific community, which fostered my motivation in researching the role of the accommodation sector in sustainable tourism.

Despite continuing to work at HI Iceland throughout the MS programme, this thesis is an independent work carried-out under the supervision of Dr. Rannveig Ólafsdóttir from the Faculty of Life and Environmental Sciences and Dr. Lára Jóhannsdóttir from the School of Business. This work is not financed by HI Iceland, but only supported with access to the Reykjavík hostels' database of guests for which I am very thankful.

To my knowledge, the research approach used in this study has not been carried-out in other published papers. Compiling this thesis has been an enriching journey, and it represents the outcome of practical and theoretical knowledge I have gained from the analysis of the accommodation sector's role in sustainable tourism.

Emilia Prodea

Reykjavík, January 18, 2016

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Abbreviations

Environment Resource Management	ERM
European Environment Agency	EEA
European Voluntary Service	EVS
European Union	EU
Genetically modified organisms	GMO
Gross Domestic Product	GDP
Hostelling International	HI
Intergovernmental Panel on Climate Change	IPCC
Loft Hostel	Loft
Reykjavík City Hostel	City
Reykjavík Downtown Hostel	Downtown
The Organisation for Economic Co-operation and Development	OECD
The Environment Agency of Iceland (i.e. Umhverfisstofnun)	EAI
United Nations Environment Programme	UNEP
United Nations Framework Convention on Climate Change	UNFCCC
United Nations World Tourism Organization	UNWTO
World Youth Student and Educational Travel Confederation	WYSE
World Travel & Tourism Council	WTTC

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Last but not least, I would like to thank my dearest partner and friend, Iosif Ciprian for being such an immense support along the years. Your constant love and understanding have enabled me to stay focused and motivated for which I am extremely grateful. Finally, I would like to thank my mother and my family for their prayers and trust in fulfilling my dream in Iceland.

1 Introduction

1.1 Tourism and climate change

The tourism industry is becoming one of the largest and fastest-growing economic sectors in the world. It currently accounts for 9% of the Gross Domestic Product (GDP), 6% of the world's exports, and one in eleven jobs worldwide (UNEP, 2015). In 2014, a total of 1.133 million international tourists travelled the world generating 1.5 trillion US$ in exports. Since 2010 the number of international tourist arrivals has increased by 5% on average (UNWTO, 2011). The United Nations World Tourism Organization (UNWTO) (2011) estimates it will reach 1.8 billion by 2030. Europe is currently the world's number one tourist destination (EEA, 2015) due to its diverse natural and cultural attractiveness. These aspects make tourism flourish, becoming a key sector of the European economy that currently generates over 10% of the European Union's (EU) GDP (EEA, 2015). The European Environment Agency's (EEA) acknowledges the environmental impacts both at the regional and local level, and actions created to respond to sustainability challenges are spread across EU legislation and policies (EEA, 2015). Tourism is thus recognized as contributing to the regional and potentially sustainable development of an area (i.e. in Europe), while at the same time shaping a European identity and awareness on natural and cultural heritage (EEA, 2015).

Following the significant contribution of tourism in Europe and internationally, the United Nations (UN) General Assembly proclaims 2017 as the International Year of Sustainable Tourism for Development. Hence, the UN recognizes the importance of international tourism to "foster better understanding among people everywhere, in leading to a greater awareness of the rich heritage of various civilizations and in bringing about a better appreciation of the inherent values of different cultures, thereby contributing to the strengthening of peace in the world" (UN, 2015, p. 3).

Studies conducted by UNWTO (2008) show that the tourism industry is responsible for 5% (1.304 Mt) of the global CO_2 emissions and is a significant contributor to climate change. UNEP (n.d.) acknowledges that the percentage of global CO_2 emissions from the tourism industry may be even higher than 5%, going up to 14%. The majority of tourism-related CO_2 emissions are associated with transportation (aviation accounting for 40% of tourism's overall carbon footprint), followed by car transport (32%) and the accommodation sector (21%) (UNWTO, 2008). Moreover, the tourism sector is considered to be climate sensitive since climate often defines the length and quality of tourism seasons, influences tourism-related operations, and affects environmental conditions that both attract and discourage visitors (UNWTO, 2009; Prideaux, 2014). Thus, climate change is likely to influence the course of tourism in the nearest future as it affects and changes directly the weather patterns (resulting in heat waves, coastal flooding, drought etc.) and the ecosystem in many areas (IPCC, 2014). Other consequences are rising the sea water level due to warmer temperatures, increasing the health risks due to the spread of disease-bearing insects, changing the agricultural and food system etc. (IPCC, 2014). Such changes and potential threats are likely to significantly affect tourists' travel decisions and their comfort. Changing demand patterns and tourist flows will impact tourism businesses

and host communities directly, and will also have effects on related sectors, such as handicrafts or construction (UNWTO, 2008). According to UNWTO (2008) the global CO_2 emissions in the tourism industry may experience a growth of 161% by 2035 (Figure 1-1) if business continues as usual. A more recent estimation anticipates an even higher increase of 169% between 2010 and 2050 (Scott, Gössling, Hall & Peeters, 2015). Emphasising the importance of applying mitigation measures, UNWTO's (2008) results consider further that if maximum technological efficiencies will be applied for all transport modes, accommodation, activities and energy usage, together with an increase in the average length of stay, the current estimations will experience dramatic effects.

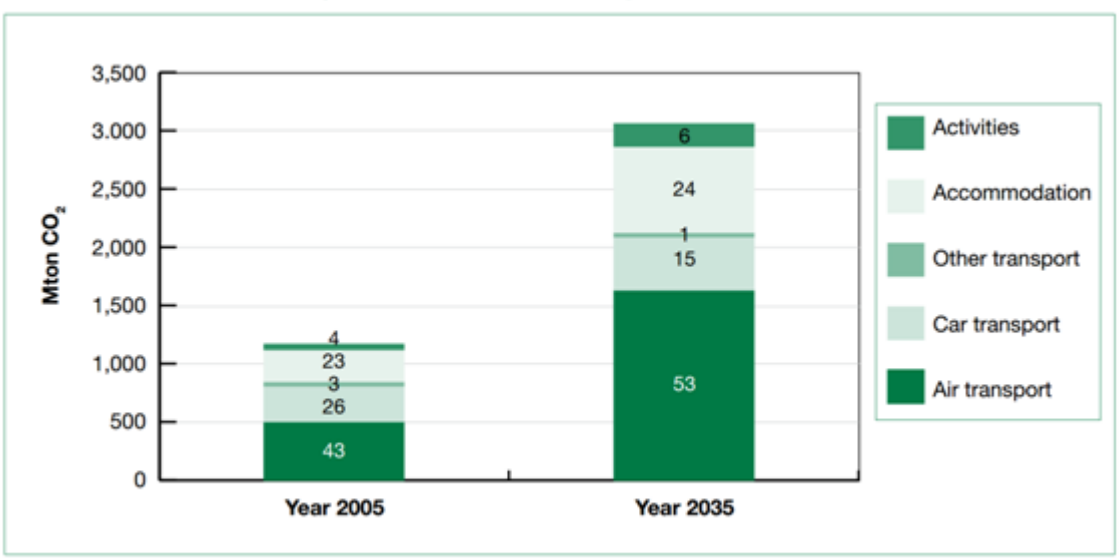


Figure1-1 Comparison of current emissions caused by tourist trips (overnights) and projections of emissions for the year 2035 under the assumptions of a "business-as-usual" scenario (UNWTO, 2008, p. 36).

Although the tourism sector seems to wield important positive economic outcomes being one of the world's most significant source of economic outcomes and employment (UNEP, n.d.), its impacts are both positive and negative. Mason (2008) points out that the economic impacts of tourism are interlinked and cannot easily be separated from the other types of impact (i.e. social and environmental).

The concept of sustainability was transferred to the tourism sector from the ideology of sustainable development (Saarinen, 2006) following the publication of the Brundtland Commission's report Our Common Future in 1987 (WCED, 1987). The concept became even more prevalent after the United Nations' Earth Summit in 1992, when the focus was on the need to enforce the principles of sustainable development within broader economic and social processes (Saarinen, 2006). The summit highlighted the role of sustainability and tourism's potential for advancing and taking further the goals of such development and since then, sustainability has been the main theme in discussions on tourism and policy management. Based on the three main pillars defined by the 2005 World Summit (UN, 2005), i.e. socio-cultural, environmental and economic, the tourism-related impacts are detailed in Table 1-1.

Table 1-1 Tourism's three main general impact areas. Modified from UNEP, 1999; Ólafsdóttir, 2015.

Socio-cultural Impacts	
Positive	**Negative**
• Preservation and restoration of cultural heritage • Revival of traditional arts and crafts • Cultivation of cultural pride and sense of identity • Cross-cultural exchange • Revitalization of non-industrialized regions	• Loss of cultural character • Loss of authenticity and meaning of traditional arts and crafts • Commercialization of human relationships • Potential misunderstandings and conflicts between residents and tourists
Environmental Impacts	
Positive	**Negative**
•Environmental awareness •Nature conservation and protection of habitats (financial contributions to conservation and monitoring) •Retain and increase visitor numbers by improving the general amenity value of the local environment	• Pollution (air pollution and noise, waste and scrap materials, sewage, visual pollution) • Depletion of natural resources (land degradation, deforestation, loss of land to tourism) • Activities affecting the natural environment (off-road driving, trampling causes disturbance to vegetation and soil) • Effects on local flora and fauna (water activities, traffic, noise, hiking on unmarked paths) • Overcrowding and traffic congestion
Economic Impacts	
Positive	**Negative**
•Retain and increase visitor numbers by improving the general amenity value of the local environment •Foreign exchange earnings •Contribution to local economy •Generation of employment •Infrastructure investment	•Inflation (increase in prices of land, houses and food) •Seasonality •Opportunity costs (engaging in tourism rather than another form of economic activity) •Dependency (the country can become dependent on tourism)

1.2 The accommodation sector

The accommodation sector is the fundamental component and the largest subsector of hospitality and tourism (Sharpley, 2000; Pender & Sharpley, 2005). Accommodation establishments are identified as a core tourism sector in the ecosystem services (EEA, 2015) (Figure 1-2). These establishments are an essential element of the tourism experience (Sharpley, 2000) as they are responsible to provide visitors with a place to stay (Charles Sturt University, n.d.). They include hotels, motels, motor lodges, resorts, bed and breakfasts (B&B), caravan parks, hostels and serviced apartments (CTHRC, n.d.). Accommodation establishments are also responsible for most of the direct land alteration linked to tourism (EEA, 2015). Such buildings do not refer just to rooms or sleeping facilities, but include often restaurants, car parks, gardens, lobbies, parking sites, trails etc. (Gössling, 2002). Moreover, it has been identified (i.e. Gössling, 2002; Chapin et al., 2000) that land alteration caused by the increasing accommodation establishments for tourists worldwide is one of the most important drivers of change in biodiversity, a factor which interacts with other global change components such as global warming.

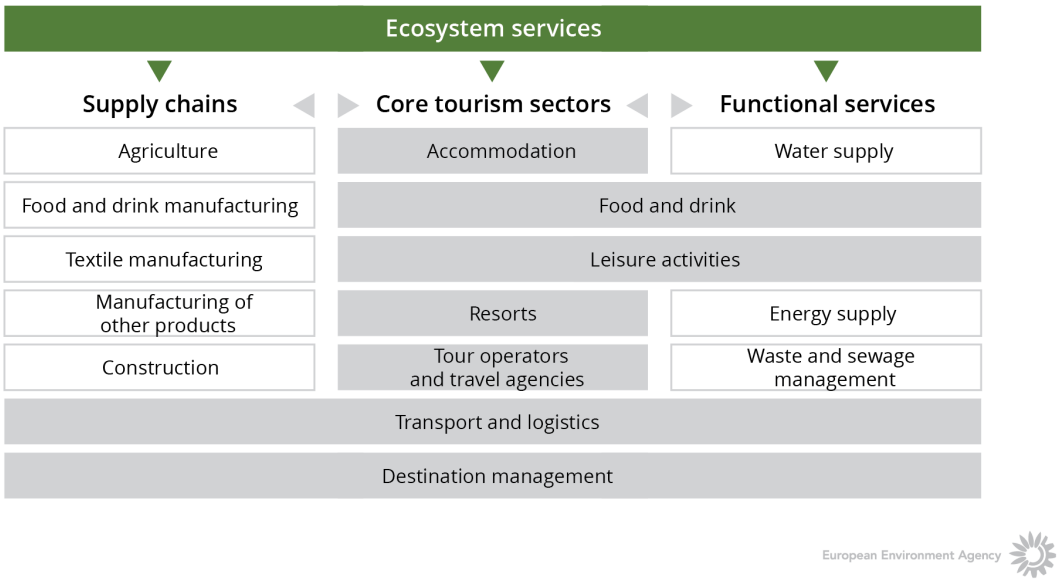


Figure 1-2 Components of the tourism sector within the ecosystem services (EEA, 2015).

Hitherto, much emphasis seems to have been put on protecting the natural and cultural capital in tourist destinations when approaching the concept of sustainable tourism, and very little on the role of the accommodation sector in the overall process of achieving it. A recent comprehensive literature review on frameworks and applications on sustainable tourism (Zolfani, Sedaghat, Maknoon & Zavadskas, 2015) identifies 132 scholarly papers from 47 journals, since 1993 to 2013. Of those papers, only 3 out of 132 address the hospitality sector. Although the review admits its limits as it was only collecting data from scholarly journals and not taking into account conference proceeding papers, master's dissertations and doctoral theses, this number is still very low.

Being such an important component of tourism, the accommodation sector is likely to have a significant role and contribution towards achieving sustainable tourism. Charles (2013) highlights the accommodation sector's need to take a more active stance in implementing sustainable practices (i.e. related to energy, water and waste). The benefits of doing so include attracting the environment-conscious tourist, having cost savings from reduced use of resources, less pollution and the preservation of the environment (Charles, 2013). This implies that the accommodation sector does not only have a direct impact on the natural resources but also has the possibility of educating and encouraging customers to take direct part in the sustainable progress of their chosen accommodation. Thus, the accommodation sector has the capacity to spread eco-conscious behaviour across its guests by increasing awareness about the aspects that brought visitors in that location in the first place.

1.3 Objective and research questions

The overall objective of this research is to assess the potential of the accommodation sector to increase sustainability within tourism, by examining the impact of sustainability-related information and practices available at tourist accommodation. The research will focus on the three Reykjavík hostels belonging to Hostelling International (HI) Iceland. These are Reykjavík City Hostel (City), Reykjavík Downtown Hostel (Downtown) and Loft Hostel (Loft). These hostels were chosen because of their extensive work in the sustainability field (see Chapter 3).

Specific objective

- To assess the relationship between guests' sustainable behaviour at home and while travelling, by analysing guests' rankings of sustainable practices.

Research questions

- How important is sustainability and ecolabelling in the selection process of an accommodation place?
- How can the accommodation sector influence guests' behaviour towards more sustainable choices?
- How can guests contribute to the sustainable development of their chosen accommodation?
- What is the role of the accommodation sector in sustainable tourism?

The results of the accommodation sector's analysis in sustainable tourism are expected to provide important information for the development of future governmental policies. Additionally, the results will provide the accommodation sector with practical sustainable tools that can be applied to all accommodation establishments, regardless of their type.

1.4 Structure of the thesis

The thesis is divided into six chapters. Chapter one presents the background introduction of tourism and climate change and puts forward the accommodation sector's place within ecosystem services. Chapter two continues with an overview of the concept of sustainable tourism, the role of eco-labelling in tourism and describes the beginning of the hostelling movement. Chapter three presents the case study, Hostelling International (HI) Iceland, the three Reykjavík HI Hostels and their sustainability management. Chapter four introduces the applied methodology. It includes data collection, description of the applied questionnaires and the sustainability indicators on which they are based; and data analysis. In Chapter five, the results of the research are presented, describing the answers related to each sustainability indicator used and the ranking scales. This chapter also includes a sub-chapter entitled 'Major findings' which extracts important findings from the research's results. The sub-chapters introduce participants' likeliness to take part in sustainable activities and what they look at when selecting an accommodation place. They also present the results related to participants' willingness to change their lifestyle to minimize the environmental impact associated with their everyday actions, as well as participants'

willingness to pay a higher price to support the local economy or for eco-certified products and services. The last question is of high value for the research as it shows participants' willingness to initiate new eco-procedures at their private household after experiencing the sustainable practices at their accommodation place. In the sixth and last Chapter the conclusions are presented and discussed critically. This Chapter also answers the research questions, outlines the research's limitations and offers potential ideas for future research in the field of sustainable tourism analysis.

2 Background

2.1 Sustainable tourism

The concept of 'sustainable tourism' was first used more than two decades ago (Buckley, 2012) (Figure 2-1). Its principles have been studied since then as they were identified as representing a micro solution to a macro problem (Wheeler, 1991). In the concept's first decade, the major focus was on studying the basic frameworks from backgrounds in tourism, economics and environmental management while in its second decade a number of critiques were registered (i.e. Zolfani et al., 2015). According to Bramwell and Lane (1993) sustainable tourism emerged in part as a negative and reactive concept in response to the tourism-related issues such as environmental damage and negative impacts on society and traditional cultures. Gradually the concept seems to have succeeded in identifying ways to secure positive benefits, helping with the implementation of established approaches of regulation and development control (Bramwell & Lane, 2012).

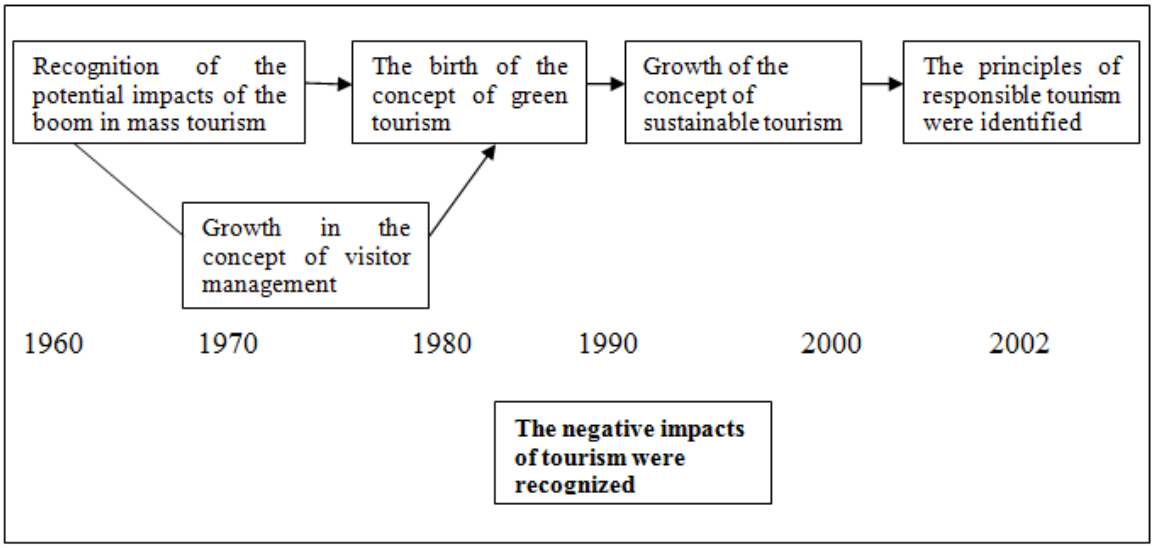


Figure 2-1 Chronological development of the concept of sustainable tourism. Modified from Swarbrooke, 1999; Ólafsdóttir, 2015.

Still, there is no generally accepted uniform definition of sustainable tourism (Hamid & Isa, 2015). The most widely used is the one from UNWTO that defines sustainable tourism as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry and the environment and host communities" (UNEP & UNWTO, 2005, p.11). Thus, sustainable tourism represents the balance between the needs and interests of tourists, host communities and the environment.

Hamid and Isa (2015) point out four features identified by Beioley (1995) for tourism to be sustainable, which are compatible with the first European Charter for a sustainable and responsible tourism, currently available only in a draft version as of 27th of April 2015 (V. Ramasauskaite, Operating Director EUFED, personal communication, May 18, 2015):
First, tourism must respect the economic well-being and social and cultural concerns of host communities. Consequently, tourism development in an area must involve

consultation and participation as well as a degree of local control. Second, tourism must respect the character of the local environment and operate within its capability to regenerate itself. Third, tourism should reduce its impact on the wider global environment in terms of depletion of natural resources and pollution. Fourth, tourism should provide a meaningful and satisfying experience for the visitor (Hamid & Isa, 2015, p. 85).

According to Swarbrooke (1999) the benefits of sustainable tourism are not solely in terms of environmental gains. He states that there can also be benefits for the business in terms of reductions in the cost-base through savings, enhanced reputations, greater appeal to more affluent customers, favourable impression to investors, improved job satisfaction for staff, enjoyable experience for visitors and benefits for the local community (Swarbrooke, 1999). However, in a more recent review of research on sustainable tourism Buckley (2012) identifies a general lack of progress in the field, stating that the sector is not yet close to being sustainable. Saarinen (2006) also emphasises that it is important to take into account the fact that tourism is like any other industry and despite its capacity to make a positive contribution to the environment and to communities; it can also be a negative element with respect to them. However, Buckely (2012) concludes that from a sustainable development perspective, the sustainable use of resources, the environment and the well being of communities are goals to which sustainable tourism could and should contribute.

Indeed, the UN recognizes the important role of sustainable tourism „as a positive instrument towards the eradication of poverty, the protection of the environment, the improvement of quality of life and the economic empowerment of women and youth and its contribution to the three dimensions of sustainable development, especially in developing countries" (UN, 2015, p. 3).

Sustainable tourism is represented with a holistic approach putting in evidence the typologies and the interdependence of different categories in the tourism sector (Figure 2-2). According to Cater, Garrod and Low (2015) the concept of 'sustainable tourism' (similarly with the concept of 'ecotourism') is not a form of tourism in itself but rather it consists of a set of principles that can be applied to all forms of tourism. In this way, the diagram in Figure 2-2 is formed of a series of concentric circles and the largest one represents tourism generally. The smaller circles represent "niche forms of tourism" (Cater, Garrod & Low, 2015, p. 21-22) beginning with natural-area tourism and continuing with nature-based tourism. The latter represents tourists interacting closely with nature through their activities, i.e. gathering rare plants, while the following category represents tourists in natural areas which may not interact directly with nature, i.e. hang-gliding. The inner circle is represented by wildlife tourism, i.e. whale-watching, and mass tourism is located in the largest circle marked simply as 'tourism' that comprises all forms of tourism. Thus, in this context 'non-sustainable tourism' refers to the area located in the largest circle, of 'tourism' in general.

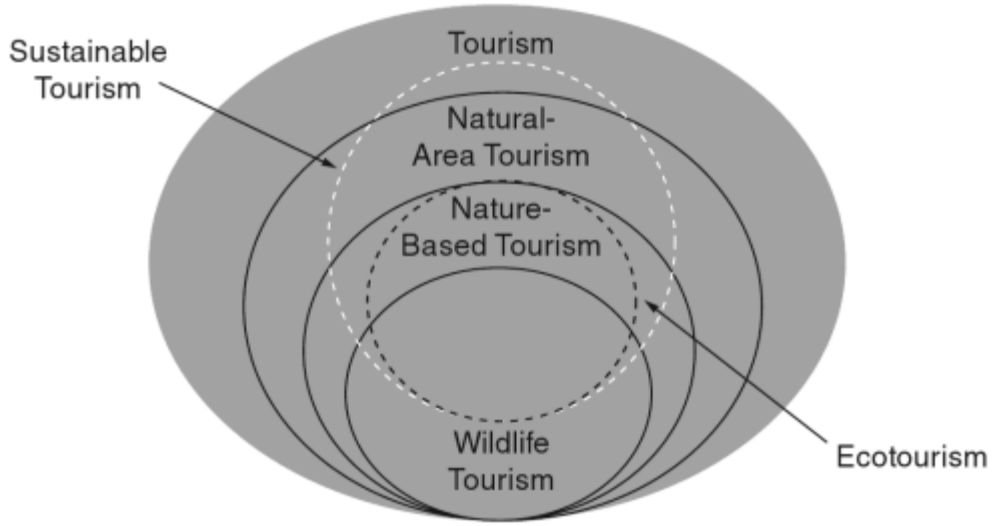


Figure 2-2 Relationship between sustainable tourism, ecotourism and some of the main forms of tourism (Cater, Garrod & Low, 2015, p. 22).

Although Figure 2-2 presented by Cater, Garrod and Low (2015) does not include the concept of 'responsible tourism', its principles are worth mentioning in this context. Hence, the concept of 'responsible tourism' emphasises on the ideology that responsible actions make a sustainable development of tourism possible (City of Cape Town, 2015). The concept stands for responsibility and awareness for decisions, actions and policies of all those involved in the planning, management, delivery and consumption of tourism, so that it is sustainable over time (City of Cape Town, 2015).

Similarly with the concept of sustainable tourism, responsible tourism is based around the three main pillars for sustainable development, i.e. social, environmental and economic (City of Cape Town, 2015) and emphasises the responsibility for actions. The recent European Charter for a Sustainable and Responsible Tourism, now currently available as draft as of April 2015 (V. Ramasauskaite, Operating Director EUFED, personal communication, May 18, 2015) takes into account the principles of both sustainable and responsible tourism. In this way, according to the Charter, sustainable tourism must not only be economically viable, meet the needs of society, conserve the environment and cultural heritage, but it should also assume responsibility for the decisions, actions and policies involved in the process meant to make tourism sustainable (NECSTour, 2015).

These emerging concepts are leading to the development of a new concept when dealing with changes in tourism: resilience thinking (Stockholm Resilience Centre, 2014a). This concept has emerged as a new idea meant to deal with the realities and problems of a rapidly changing environment. According to the Stockholm Resilience Centre (2014b, p. 3), resilience refers to the "capacity of a system, be it individual, a forest, a city or an economy, to deal with change and continue to develop; it is about the capacity to use shocks and disturbances like a financial crisis or climate change to spur renewal and innovative thinking". Although a lack of resilience assessments has been identified in the tourism literature (Lew, 2013; Luther & Wyss, 2014), the resilience approach to community planning and development in tourism seems to be a more effective approach

than the initial sustainability paradigm (Lew, 2013). Thus, the resilience of tourism systems with interrelated socio-economic-ecological aspects refers to the capacity of these systems to deal with stresses by maintaining the stability of tourism-related regional economy. At the same time, the system should be ensuring the flexibility and diversity needed for further development and innovation in the field.

To serve the purpose of the current research, the principles that refer to the sustainability of the tourism sector and the responsibility of the decisions involved to make the sector resilient to socio-economic-environmental changes will be taken into account. As a core tourism sector in the ecosystem services, the accommodation sector interferes with all types of tourism-related forms and concepts. Hence, the accommodation sector acts as a bridge between different forms of tourism and has the potential to increase sustainability and resilience across the entire tourism industry.

2.2 Ecolabelling

An ecolabel is defined as a "label which identifies overall environmental preference of a product or service based on life-cycle considerations" (UNOPS, 2009, p. 2). It further recognizes a product or service that meets environmental performance criteria or standards (Golden, 2010) which ultimately strives to promote sustainable behaviour (Watanatada, 2011).

The number of ecolabels increased approximately fivefold between 1988 and 2009 (Gruere, 2013) as a response of pressures for better environmental sustainability of production and consumption structures. At the same time, the tourism industry has been adopting numerous ecolabels, along with generic certification systems such as the ISO 14000 environmental management series (Font & Buckley, 2001; Font, 2001). Some of the most recognized international ecolabels used in the travel industry include: Blue Flag, Nordic Swan, Nature's Best Ecotourism, Steinbock and the Sustainable Travel Eco-Certification Program (STEP). Moreover, from over100 ecolabels available for tourism and hospitality, a few of them can be used to certify hostels (Font, 2001).

Piper and Yeo (2011) point out that ecolabelling is not uniformly regulated as some labels are created by individual businesses with little or no third party oversight. They further point out that quite often, tourism establishments create their own label or self-description, such as 'eco resort', which they use in their advertising and marketing material. The label may be detailed by a statement of philosophy or description of the location's environmentally-friendly measures in place, but there is no third party oversight. It is therefore important to distinguish these 'first-party' labels from 'third-party' labels that occur in the context of certification programs that regulate the use of ecolabels. There are many programs which regulate different labels, and Piper and Yeo (2011) argue that in order to qualify to use a given label for their products and services, providers must meet specific program conditions and standards, which are different for different programs. That a product or service bears a label means that the provider has met those conditions and standards (Piper & Yeo, 2011).

Piper and Yeo's (2011) review of the literature in tourism and leisure, marketing, advertising, economics and corporate strategy, reveals that much of the research on eco-certification and ecolabels is limited to understanding the influence on the attitudes and

behaviour of consumers of some "green" products. Moreover, very little exists on the impact on tourist behaviour specifically, and almost none on eco-tourist behaviour. However, a recent study by Havas (2014) shows that 34% of consumers worldwide choose one brand over another because it is more socially or environmentally responsible. It further shows that the consumers have bigger future environmental expectations for themselves than in 2015 as 67% of participants express their intention to select more socially and environmentally responsible brands. These results complement previous research from 2011, when the Nielsen Global Survey on Corporate Social Responsibility found that 55% of global consumers are willing to pay more for goods and services from companies that have engaged in programs to reduce negative effects in the social and environmental fields (Patterson, 2000). When it comes to the applicability on the accommodation sector of such surveys, Cornell University has carried out two studies related to consumers who are willing to pay extra to stay at hotels with environmental practices (Chong & Verma, 2013; Kang et al., 2012). However, according to Chong and Verma (2013), if a hotel is awarded with an eco-certification, it does not mean that the revenues will increase automatically, but nor will the revenues fall. The establishments that have received an environmental label may be cheaper to operate and thus, have the chance to potentially create higher profits.

Given the increased importance that customers place on ecolabels, participants in the current research are asked to rate the importance of sustainability and eco-labelling (i.e. Nordic Ecolabel) in their selection process of an accommodation place.

2.3 The hostelling sector

The hostelling movement started in Germany with Richard Schirrmann, a German teacher, who enjoyed exploring the countryside with his students (Heath, 1962). He preferred to learn through direct observation in a natural environment instead of the traditional teaching in a classroom. Gradually, exploring the region by foot became an important part of his teaching classes. He also took his students on regular hiking trips that could last up to several days during summers. Schirmann and his students used summer farms as shelters but according to Heath (1962), they encountered challenges in finding accommodation at that time. In one of his teaching journeys, on August 26th, 1909, the group was caught in a thunderstorm that lasted all night. The group got shelter in a school building in Bröl-dal and the school principal let them use a classroom to sleep while a local farmer gave them hay to sleep on. While the group slept, Schirrmann stayed awake. It was then that he got the idea that schools in Germany could be used to provide accommodation in the summer time especially, when there were no classes going on (Heath, 1962; Friðriksdóttir, 2012).

It was that stormy night that offered Schirrmann's the idea for what was to come, and what developed into the big hostelling movement that it is today. In 1910 Schirmmann wrote an essay about his idea called 'Volksschülerherbergen' or 'Hostels'. He believed that two classrooms would be sufficient, one for boys and one for girls. The tables would be removed so that the necessary space would be created for 15 beds and each bed would consist of a simple mattress and pillow, sheets and blanket. In 1912, the first formal hostel was opened in Altena Castle which is still a hostel today. Schirrmann's idea got easily spread all over the world and in 1919 he founded the German Youth Hostel Association (Heath, 1962).

In 1932, the Youth Hostel Federation was founded in Amsterdam by representatives from Switzerland, Czechoslovakia, Poland, Holland, Norway, Denmark, Britain, Ireland, France and Belgium. Hostelling International (HI) is the brand name of the Youth Hostel Federation (IYHF) founded to coordinate the Youth Hostel Associations around the world. It is a non-governmental, not-for-profit organisation consisting of over 4.000 hostels in 90 countries (HI Hostels, 2015). With over four million members worldwide HI is currently one of the world's largest youth membership organisations (HI Hostels, 2015). Its mission as stated in its constitution, in the Memorandum and Articles of Association, Article 4 states:

To promote the education of all young people of all nations, but especially young people of limited means, by encouraging in them a greater knowledge, love and care of the countryside and an appreciation of the cultural values of towns and cities in all parts of the world, and as ancillary thereto to provide hostels or other accommodation in which there shall be no distinction of race, nationality, colour, religion, sex, class, or political opinions and thereby to develop a better understanding of their fellow men, both at home and abroad (HI Intranet, 2015, p. B-1-2; HI Hostels, 2015).

Today, HI is the 6th largest provider of accommodation in the world with approximately 31 million overnights in its network of hostels in 89 countries (B. Lopez, personal communication, June 8, 2015). The organization's mission is considered in its network of National Associations and hostels, to be one of the earliest definitions of what is now called 'sustainable travelling' as it is touching on core values such as "love and care of the countryside and appreciation of cultural values of towns and cities in all parts of the world*"* (HI Intranet, 2015, p. B-1-2; B. Lopez, Sustainability Manager of HI, personal communication, June 8, 2015). HI is working in partnership with The Global Sustainable Tourism Council (GSTC) to promote sustainable tourism practices at the global level in all its member associations (HI Hostels, 2015).

In the context of this research thesis, 'hostel' is defined as an accommodation establishment that fulfils HI's mission and standards of quality and sustainability.

3 Case Study

The chapter starts with an introduction of the evolution and current status of tourism and sustainable tourism in Iceland. It continues with a description of Hostelling International (HI) Iceland, the non-governmental organization that operates the three Reykjavík Hostels (i.e. Reykjavík City Hostel, Reykjavík Downtown Hostel and Loft Hostel) used for the case study. The chapter also presents briefly the organization's sustainability management and the two main ecolabels the organization is using (i.e. the Nordic Ecolabel and the Green Hostels criteria).

3.1 Tourism in Iceland

During the last two decades Iceland has experienced a substantial increase in tourism which has grown to be the most significant economic sector in the country, followed by fisheries and the aluminium industry (ITB, 2015). The total contribution of travel and tourism in the country represents approximately 23.3% of the total GDP (WTTC, 2015). The mean annual increase in international visitors to Iceland since year 2000 has been 9.3%, and in 2014 the total number of visitors reached 997.556 (ITB, 2015) (Figure 3-1). This indicates an increase almost three times more than the entire population of the country (Statistics Iceland, 2015).

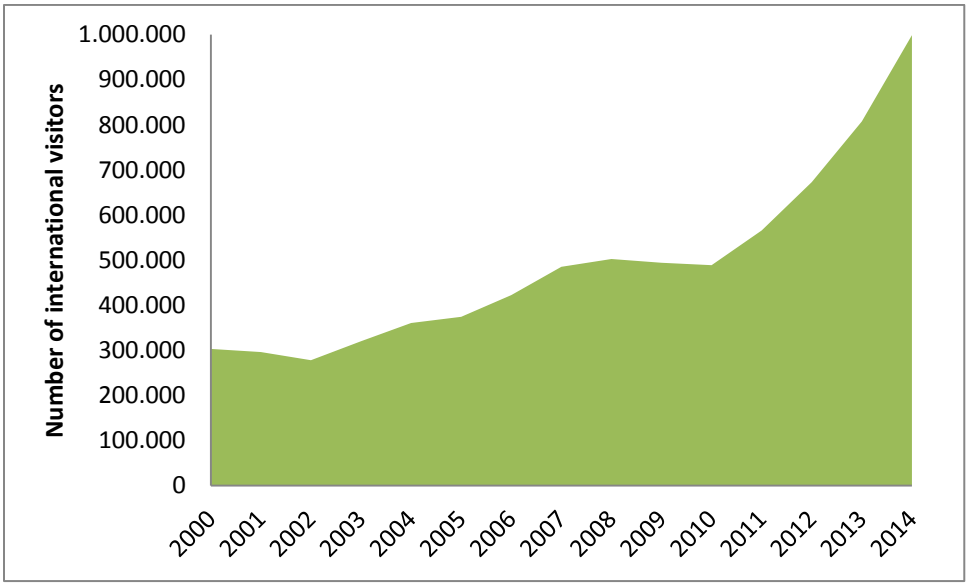


Figure 3-1 Number of international visitors to Iceland 2000 – 2014 (ITB, 2015).

Although Iceland's capacity for an ever growing tourism sector has long been debated among scientists and stakeholders in the field (Nicholls & Amelung, 2015; Gren & Huijbens, 2014; Jóhannesson, 2012; Jóhannesson & Huijbens, 2010), the increasing number of foreign visitors contributes to the country's economy and development, both in financial and employment figures (Statistics Iceland, 2015; WWTC, 2015). Moreover, tourism serves as a positive alternative for regional development (e.g. Huijbens, Jóhannesson & Jóhannesson, 2014; Ólafsdóttir & Dowling, 2014).

Despite the fact that Iceland is still seen from outside as one of the 'greenest' countries in the world (Environmental Performance Index, 2015), these flourishing numbers seem to be facing diverse threats. Not only does climate change affect the exceedingly vulnerable landscapes of the country, but unbalanced and unmonitored growth implicates the danger of an unsustainable exploitation (Ólafsdóttir & Dowling, 2014), contributing further to climate change effects locally and globally.

The OECD's Environmental Performance review on Iceland in 2014 concludes that erosion and congestion are some of the most important local environmental impacts of tourism in Iceland. Thus, OECD recommends the implementation of a comprehensive strategy for sustainable tourism development that is closely co-ordinated with policies for land use, infrastructure and nature conservation (OECD, 2014). A strategy promoting a green economy in Iceland was agreed unanimously by the Parliament of Iceland, Althingi, in 2011. However, its published tourism strategy for 2011-2020 does not mention a concrete strategy, action or financing plan, despite mentioning sustainable tourism as an aim (Althingi, 2010). Moreover, the Icelandic Tourist Board's rather new quality and environmental system for Icelandic tourism (i.e. Vakinn) offers the environmental criteria only optionally to those who fulfil the quality standards (Vakinn, n.d.a). Despite being based on the ideology of sustainable development and sustainable tourism (Vakinn, n.d.b), it is noteworthy that Vakinn's mandatory criteria for accommodation do not cover points related to erosion, congestion, land use and nature conservation. This fact also indicates that although sustainable tourism is an aim in Iceland, it does not seem to be a priority for the governmental bodies.

3.2 Hostelling International (HI) Iceland and the Reykjavík Hostels

3.2.1 HI Iceland

Hostelling International (HI) Iceland, known by its Icelandic name Farfuglar (translated in English as 'migrating birds'), is a non-governmental and non-profit membership organization established in 1939. The organisation is a member of Hostelling International (HI) and is formed of 33 hostels around Iceland (hostel.is, n.d.). All three Reykjavík Hostels (i.e. City, Downtown and Loft) are owned and run directly by HI Iceland. The other 30 hostels are privately owned but working in close co-operation with HI Iceland through standard co-operation agreements for quality and sustainability (M. Einarsson, CEO HI Iceland, personal communication, June 8, 2015). HI Iceland is also a certified travel agency and acts as a booking office for the affiliated hostels. Moreover, as of 1999, the organization manages the Reykjavík Campsite during the summer time. The campsite is owned by The City of Reykjavik and is located right behind Reykjavík City Hostel, in the Laugardalur area (M. Einarsson, CEO HI Iceland, personal communication, June 8, 2015).

The organization's work in the environmental and sustainability field started back in 1999 when the organization published its first Environmental Policy (M. Einarsson, CEO HI Iceland, personal communication, June 8, 2015; hostel.is, n.d.). Since then, the organization and the three Reykjavík HI Hostels have received several awards and recognitions for their contributions to protecting the natural environment (Hostel, n.d.).

Some Awards worth mentioning include the annual City of Reykjavík Environmental Award, awarded to the Reykjavík City Hostel in 2002, the Icelandic Tourism Environmental Award in 2003, awarded to HI Iceland and again in 2010 for both the Reykjavík City Hostel and Reykjavík Downtown Hostel (Hostel, n.d.). In 2015 HI Iceland furthermore received the 3rd place in the Green Accommodation Initiative category at the Global Youth Travel Awards organized by the Wyse Travel Confederation in Cape Town (WYSE, 2015). Moreover, all three Reykjavík HI Hostels are recognized by Tripadvisor as GreenLeaders, carrying the Gold level (tripadvisor, n.d.; Hostel, n.d.).

HI Iceland has published its 'Declaration of quality and sustainability' in June 2014 when the organization was awarded the HI-Quality Office certification (Hostel, 2014). Moreover, in November 2015 HI Iceland together with a professional consultant have organized workshops for its staff and owners of the affiliated hostels in order to upgrade the organization's 'Environmental Policy' from 1999 into a 'Sustainability Charter'. The Charter will integrate social and economic aspects in the current 'Environmental Policy' since the organization acknowledges how interrelated the three pillars of sustainability are (i.e. economic, social and environmental) (M. Einarsson, CEO HI Iceland, personal communication, November 20, 2015).

HI Iceland had approximately 240.000 overnights in its network of hostels in 2014 (M. Einarsson, CEO HI Iceland, personal communication, June 8, 2015) and the hostelling sector in Iceland represents approximately 8% of the total overnights in the summer time and 6% in the winter time (ITB, 2015). Given the significant percentage the hostelling sector occupies in the Icelandic market, it is important to assess the contribution it is making to the sustainable tourism objectives of the country. The research will further put into perspective the accommodation's sector role in the sustainable tourism objectives at the global level.

3.2.2 Reykjavík City Hostel

Reykjavík City Hostel (City) was the first hostel to open in Reykjavík in 1986. It is located in the Laugardalur Park next door to the largest recreational swim and sport facilities of Reykjavík. The hostel is a busy international key hostel with 180 beds in 42 rooms and with approximately 95% occupancy each year from May to September and 65% on an annual basis (S. Ólafsdóttir, Manager Reykjavík HI Hostels, personal communication, July 13, 2015).

City was also the first hostel in the Nordic countries to have received the Nordic Ecolabel certification, in 2014. Since then, the hostel has fulfilled the criteria every year and obtained every third year the re-certification (EAI, n.d.; S. Ólafsdóttir, Manager Reykjavík HI Hostels, personal communication, July 13, 2015).

Starting 2006, the hostel received European Voluntary Service (EVS) volunteers in the Green Hostels project (salto, n.d.), which have according to S. Ólafsdóttir (Manager Reykjavík HI Hostels, personal communication, July 13, 2015) been of great help in maintain the Nordic Swan certification as well as in improving the sustainable practices of the hostel among the team. The project Green Hostels has been supported by the Youth in Action/Erasmus+ Programme of the European Commission since the very beginning, and in 2015 the number of EVS volunteers hosted by the hostel in the project counted as 15.

The management of the hostels aims to continue the project in the future (S. Ólafsdóttir, Manager Reykjavík HI Hostels, personal communication, July 13, 2015).

In 2011, the Reykjavik City Hostel was acknowledged as one of the 10 best eco hostels in the world (Festa, 2011). In 2012, the hostel was furthermore acknowledged together with Reykjavik Downtown Hostel as being the lowest CO_2 emitting hostel worldwide in the Hostelling International network (MyClimate, 2012; B. Lopez, Sustainability Manager of HI, personal communication, October 10, 2012; Hostel, 2013).

3.2.3 Reykjavík Downtown Hostel

Reykjavik Downtown Hostel (Downtown) was opened in 2009 and it has 68 beds in 19 rooms. The hostel is very centrally located in Reykjavík. In 2014 it was rated by HI customers worldwide as the 2nd Best Hostel and 3rd Greenest Hostel in the HI Network. In 2015, the hostel was rated as the Best Hostel Worldwide and it received again the 3rd place as the Greenest Hostel in the HI network based on customers' ratings (C. Yerle, Communications & Events Manager of HI, personal communication, November 16, 2015; Hostel, 2015). Downtown is also certified by the Nordic Ecolabel since 2010, becoming the second hostel to receive the certification in Iceland (EAI, n.d.).

3.2.4 Loft Hostel

Loft Hostel (Loft) was opened in April 2013 and has benefited since its establishment from the sustainable practices developed at the first two Reykjavik HI Hostels. It has 94 beds in 19 rooms and is very centrally located in Reykjavík. Loft obtained the Nordic Ecolabel certification only six months after its opening, and in 2014 it was nominated by HI customers as the Best Hostel in the HI network worldwide. The hostel is also the first one to obtain the HI Quality and Sustainability certification after taking part in a pilot audit in June 2014 (Hostel, n.d.). Moreover, Loft is fully equipped for disabled and wheelchair users. It holds the Accessibility Label, i.e. a quality label that provides information to users about accessibility (Hostel, n.d.).

3.3 Sustainability management

The drivers behind companies' environmental actions have been classified by Hoffman (2000) using five main categories. These are regulatory, international, resource, market and social drivers. Of these drivers, HI Iceland´s main motivational drivers have been the social and market ones, as the management of the organization was not only aware of the environmental benefits; but seized the social and market value in implementing an environmental system to support the organization's mission and provide extra value to its customers and staff (S. Ólafsdóttir, Manager Reykjavík HI Hostels, personal communication, July 13, 2015).

The two main ecolabels of HI Iceland are the Nordic Ecolabel and the Green Hostel standards, the second one being developed by the organization with the help of an external consulting agency.

3.3.1 Swan – the Nordic Ecolabel

The Nordic Ecolabelis an ISO 14024 type 1 ecolabelling system and a third-party control scheme established in 1989 by the Nordic Council of Ministers. The label is now recognized as the official ecolabel of the Nordic countries. The main aim behind creating the ecoabel was to provide an environmental labelling scheme that would contribute to sustainable consumption as well as to develop a practical tool for consumers to be able to recognize and choose environmentally-sound products (Nordic-ecolabel.org, n.d.).

An international study conducted in 2008 by the Environmental Resources Management (ERM, 2008) on over 200 ecolabels, awarded the Nordic Ecolabel among the best and reliable ecolabels in the world. The Nordic Ecolabel was assessed to be particularly reliable when it comes to achieving environmental improvements, transparency of the system and cooperation with the industry in developing the criteria used. According to the information presented on the Nordic Ecolabel's main page, 94% of the participants in a recent survey recognized the Swan as an ecolabel (Nordic-ecolabel.org, n.d.).

The Nordic Ecolabel has developed strict criteria on core environmental aspects such as chemical use, energy and water consumption, waste recycling, purchases and regular training and guest information. It currently has 63 product and service categories which are reviewed every 3-5 years (Nordic-ecolabel.org, n.d.).

In Iceland, the Environment Agency (i.e. Umhverfisstofnun) is responsible for the national management of the Nordic Ecolabel. Currently 29 services hold the Nordic Ecolabel in Iceland, thereof are the three Reykjavík HI Hostels (EAI, 2015).

3.3.2 Green Hostels criteria

According to HI Iceland's Chief Executive Officer (CEO), Markús Einarsson, the board of HI Iceland decided in 2006 to integrate basic mandatory environmental standards for all its hostels in its General Quality Standards of the organization. Following this decision, a special criterion with supplemental standards was created for those hostels who wanted to go even further in their daily practices. The special standards lead to the creation of the 'Green Hostel' criteria and in order for the hostels to receive the recognition, a third party consulting agency goes and audits the hostels, making sure all standards are fulfilled. In 2015, 20 hostels in Iceland have fulfilled the criteria and are called 'Green Hostels' (M. Einarsson, CEO HI Iceland, personal communication, June 8, 2015).

HI Iceland actively encourages its franchised hostels to fulfil the Green Hostels criteria and even covers all costs of the consulting agency related to transportation and audit of the hostels (M. Einarsson, CEO HI Iceland, personal communication, June 8, 2015). Moreover, the organization states that the Green Hostel logo makes it easier for travellers to go for a "greener" choice. However, it is important to note that this is not a recognized environmental certification but standards that HI Iceland decides and supervises, with the professional support of a consulting agency (Hostel, n.a.).

3.4 Summary of the chapter

As tourism in Iceland became the most important economic sector in the country there is a great need to adopt sustainable practices and policies to balance the negative effects of tourism.

By adopting the principles of sustainable tourism, the accommodation sector has the potential to increase sustainability in the tourism sector as it interferes with all types of tourism-related forms.

HI Iceland and the three Reykjavík Hostels have been implementing sustainable practices and information at the hostels since they have published their first Environmental Policy in 1999. The Nordic Ecolabel and the Green Hostels criteria have helped the hostels improve their sustainable practices every year. Thus, HI Iceland is currently recognized as the environmental leader in the tourism sector in Iceland (Sparf, 2015). Due to their rich experience in the sustainability field, the three Reykjavík HI Hostels were chosen as a study case to assess their guests' ranking and satisfaction with the current sustainable practices and information offered by the hostels.

4 Methodology

4.1 Data collection

In order to assess the potential of the accommodation sector to increase sustainability within tourism, it was decided to use a quantitative research approach. This method allows an empirical investigation of multiple areas and it offers access to respondents with different backgrounds. It was further decided to use online questionnaires as such surveys are easily applicable and the researcher can reach out to a larger and more diverse group of respondents than by using conventional questionnaires. Such questionnaires are also a time and cost-saving option for data collection (Sax, Gilmartin & Bryant, 2003); and are convenient both for the participants and the researchers as they can be completed at the respondent‘s leisure time. In addition, online surveys are useful as they are designed to provide both feedback and summary statistics about an individual’s responses (Sax, Gilmartin & Bryant, 2003). However, this approach enabled a convenience sampling as each individual could choose to participate or not in the survey (Fricker, 2008). Thus, the sample may not be representative at the population level and the results are likely to be applicable mainly to participants coming from the same countries as the respondents.

In order to assess the relationship between the guests’ sustainable behaviour at the accommodation place and at home, it was decided to carry out two surveys (Figure 4-1). One initial survey to be sent before the guests’ arrival at the HI Reykjavík Hostels, referred to as Survey 1, and a second survey to be sent after the guests’ stay at the hostels, referred to as Survey 2. The research was conducted during a period of over two months, from August 6th 2015 to October 15th 2015 in order to include both customers arriving in the high and low seasons.

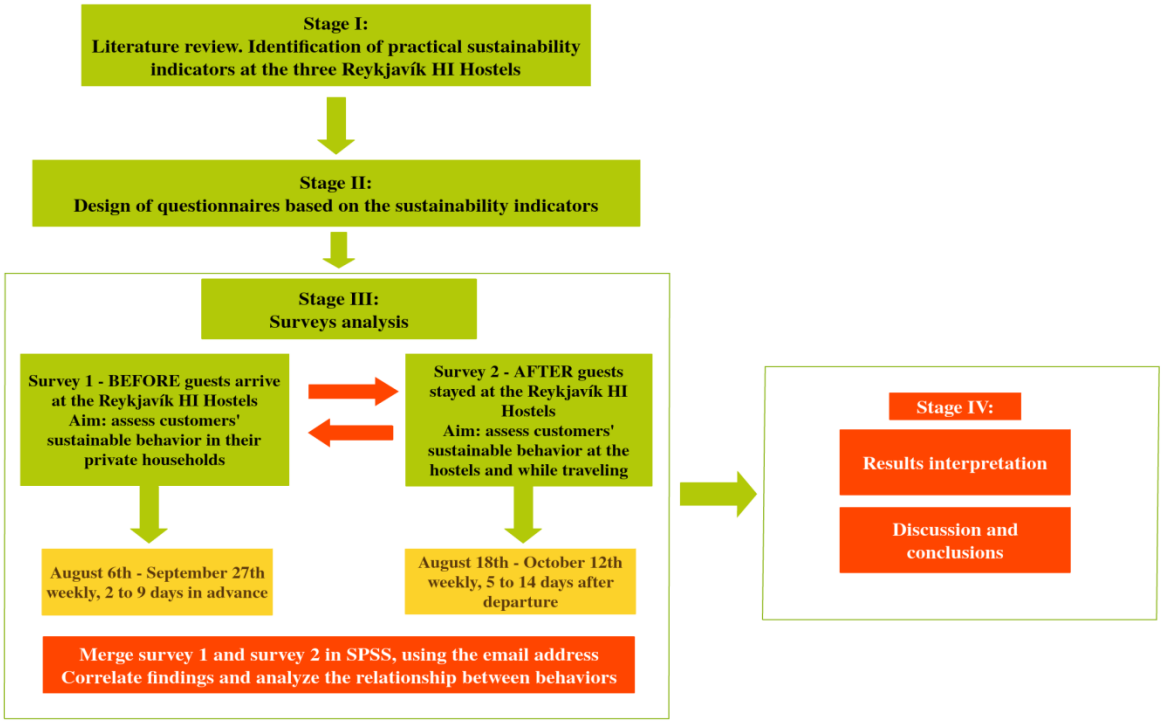


Figure 4-1 Flowchart presenting the research’s working procedure.

- **Survey 1 – before arriving at the Reykjavík HI Hostels**.
  Email addresses of recipients were collected from the ASSD management software programme where all bookings of the three Reykjavík Hostels are registered. Starting in August 6th 2015 until September 27th 2015, in each week a set of the same survey was sent out via SurveyMonkey to customers who had booked a room at the three hostels and were about to arrive in the next two to nine days. During the six weeks of data collection, six sets of surveys were sent out for each hostel, all followed up by a reminder email. A total number of 1.859 registered guests received the survey before their arrival at the hostels, out of which 461 replied or a 25% response rate (Table 4-1). Out of 461 respondents, 26 (6%) abandoned the survey after answering the first questions, leaving a total number of 435 respondents who finalized survey 1.

Table 4-1 Number of guests who received Survey 1 divided by hostels and response rate.

Survey 1 – Sustainability in private households	**Number of customers who received the survey**	**Individual customers who answered**	**Response rate %**
City	592	127	21
Downtown	607	160	26
Loft	660	175	27
Total	**1.859**	**461**	**25**

- **Survey 2 – after staying at the Reykjavík HI Hostels**.
  The second survey was sent out 5 to 14 days after guests' departure from the hostels, followed up by two reminding emails. It was sent out also via SurveyMonkey to the 461 respondents who replied to the first survey. A total of 326, or 71% answered the survey (Table 4-2). From these, 16 (5%) of the respondents abandoned the survey after answering the first few questions, 11 were identified as duplicates, resulting in a total number of 299 participants who completed the surveys, or a 16% response rate from the total sample.

Table 4-2 Number of guests who received survey 2 divided by hostels and response rate.

Survey 2 – Sustainability in the accommodation sector	**Number of customers who received the survey**	**Individual customers who answered**	**Response rate %**
City	127	98	77
Downtown	160	97	61
Loft	175	131	75
Total	**461**	**326**	**71**

When analysing the data, four respondents were identified as having completed only the second survey, but abandoned the first survey after the first few questions; therefore the final number of respondents that completed both surveys is 295.

The two surveys were linked to each email address and thus the chance to have biases from fraudulent external respondents (i.e. incentive driven respondents or robot answers) was eliminated. Although 11 persons have completed twice the second part of the survey, they

have been identified with the 'identify duplicate cases' function in the SPSS Statistical Analytics Programme and only individual email addresses and respondents were kept and used for the analysis.

The advantages and disadvantages of sending two shorter surveys or a longer one that encompasses all questions from both surveys were discussed with the thesis advisors beforehand and it was decided to divide the questionnaire into two parts for two main reasons:

- To shorten the time spent on the survey since a very long survey is more likely to cause biases due to potential high abandon rates.
- To fulfil one of the research questions and try to identify what (if any) is the relationship between guests' sustainable practices at home and while travelling. Thus, it was important to have the guest's opinion before and after their stay at the three Reykjavík HI Hostels. By sending survey 1 to respondents before arriving at the hostels, the results are less likely to be influenced by the information and procedures displayed at the hostels.

However, the risk of having a lower answer rate in the second survey was discussed and assumed, as being preferred to the alternative option of having more incomplete answers from one big survey. Moreover, due to the author's position in the organization used as a case study, it was decided to not use qualitative methods in order to avoid potential influence on respondents' answers or a subjective interpretation.

In order to encourage participants to take part in both surveys, a chance to win a prize consisting of a travel package in Reykjavik was offered to those who completed both surveys. The prize was mentioned in the first survey, before arriving at the hostels. It consisted of a weekend stay for two persons at Loft Hostel, in a private room with bathroom, linen and breakfast, plus a Golden Circle day trip to explore some of Iceland's most stunning sights. The winner was selected in a random raffle from those participants who finalized both surveys and was announced on 30th of October 2015. The prize can be used anytime between 01.12.2015-30.04.2016 and 01.12.2016-30.04.2017 by the winner, or offered as a gift to members of family or friends (Appendices A and B).

The response rate in both surveys is rather good to high (i.e. 25% in survey 1 and 71% in survey 2). The very small abandon rate (i.e. 6% in survey 1 and 5% in survey 2) shows that the initial assumption of having two shorter surveys instead of a longer one (i.e. that is more likely to have higher abandon rates) was validated. However, an overall 16% response rate from the total sample is rather low. Studies by Deutskens, Ruyter, Wetzels and Oosterveld (2004) reveal that raffles with small prizes and with a higher chance of winning are more effective in increasing the response rate. Therefore, it may be that respondents were not interested in the incentive offered in the current research i.e. random raffle with only a single high price.

The respondents who took part in the study are possibly not only those who are interested in the topic of the research, but also those who are eager to bring their contribution to the study as also reflected in the open-ended answers (see Chapter 5.10). Moreover, participants in the first study might have been curious to find out more about their future accommodation place since the reason to receive the survey was their booking at the three Reykjavík Hostels (Appendix A). Response rate can be generally influenced by various

factors and it is challenging to determine participants' reasons to take part or not in the current study.

4.2 Questionnaires' design

In order to meet the overall objective of the research, it was considered essential to evaluate not only the frequency of several sustainable practices used at guests' home and while staying at the hostels; but also the guests' level of satisfaction of the current sustainable actions available at the three Reykjavík HI Hostels. In this way, the two questionnaires were developed according to the sustainable practices identified in the literature review at the three Reykjavík Hostels (i.e. sustainability indicators in the context below). The indicators were grouped according to the Nordic Ecolabel criteria and HI Iceland's own Green Hostel standards into seven main categories (Figure 4-2) i.e. water conservation, energy conservation, waste management, food and beverages, purchasing of chemicals and consumables, information and education and transportation. Each category is formed of several sub-sections presenting the practical sustainability indicators which have been ranked by participants.

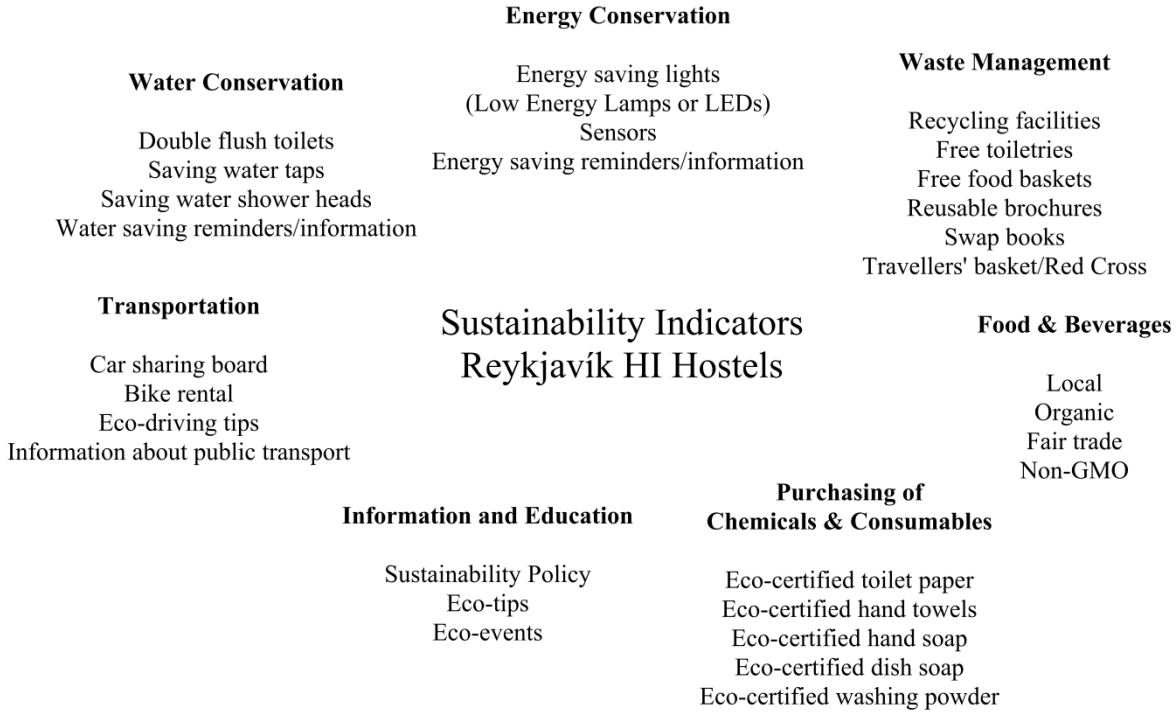


Figure 4-2 Sustainability indicators identified at the three Reykjavík HI Hostels, based on the Nordic Ecolabel and Green Hostels schemes.

Survey 1 (i.e. that refers to participants' sustainability practices at home) consisted of a total of 17 questions that were sorted according to the sustainability indicators into seven categories (Figure 4-2; Appendix A). The first section, which includes questions one to three, asks information related to participants' understanding of the concept of 'sustainability'. It further asks participants to identify themselves with several statements that apply to them, meant to identify participants' interest in sustainability-related information. The following section related to waste management, covers the questions four and five which tries to identify participants' frequency related to waste-reduction actions.

Question six refers to energy-related practices while question seven covers participants' frequency of water-related practices and habits at home. The transportation-related questions are covered by question eight. Question nine and ten are related to the participants' purchasing behaviour regarding eco-certified consumables and chemicals they have at home. The following section, question eleven, covers participants' behaviour regarding the purchasing of fruits and vegetables. At the end, a few demographic questions were asked as it was essential to gain an overview and knowledge about respondents' nationality, age category and highest level of education completed. Finally, the survey ends with an open-ended question giving respondents the chance to add other sustainable practices of theirs which were not covered in the survey.

Survey 2 (i.e. that refers to the sustainability practices while at the three hostels and in Reykjavík) is constructed similarly to survey 1, following the sustainability indicators (Figure 4-2; Appendix B). The survey starts with questions related to participants' hostel where they have stayed and their length of stay. The second section covers question three which asks participants to choose the statements that apply to them, connected to the hostels' display of sustainability-related information and events. The following section encompasses questions related to participants' frequency of waste reduction-related practices while at the hostels and participants' satisfaction with the waste-related practices offered by the hostels (questions four and five). In this section participants are also asked to choose from several statements the ones that apply to them, connected with the topic of the section (question seven). Similarly, the following sections related to energy (questions seven to nine) and water conservation practices at the hostels (questions 10 to 12), as well as transportation-related information (questions 13-15) follow the same structure. The sections start with questions assessing participants' usage of sustainable practices offered by the hostels, their satisfaction with them and to select the statements that apply to them in each category. Section six refers to the eco-certified consumables and chemicals offered by the hostels (questions 16 and 17). Section seven covers the food and beverages topic (questions 18-20), and asks participants about their consumption and purchasing behaviour while in Reykjavík. It also asks participants about their satisfaction of the hostels' availability of local/organic/fair trade/non-GMO produce and asks them to choose from two statements the one that applies to them. Finally, in the last section (question 21), participants are asked to rate their willingness to change their lifestyle to minimize the environmental aspects associated with their everyday actions. This section further asks about participants' willingness to pay a higher price to support the local economy and for eco-certified products and services. It also asks participants to rate their willingness to initiate new eco-procedures at their private household after experiencing the sustainable practices offered by the hostels. At the end (questions 22 and 23) asked participants about the importance of sustainability and the Nordic Ecolabel in their accommodation selection process. These questions were asked in order to answer one of the research questions i.e. how important sustainability and eco-labelling are in the accommodation selection process. Finally, the survey ends with an open-ended question allowing participants to add any other comments of their choice.

In order to answer the research's specific objective i.e. assess the relationship between participants' sustainable behaviour at home and while travelling, a series of correlations were made between participants behaviour at home and while staying at the hostels in Reykjavík (Appendix C). No statements are offered and no correlation is done for the category 'purchasing of eco-certified consumables and chemicals' since these items are

bought irregularly and it is less likely that participants purchase such items while travelling.

After analysing the rankings of the sustainability indicators and the willingness-related questions it will be possible to answer the last two research questions, i.e. how can the accommodation sector influence guests' behaviour towards more sustainable choices and how can guests contribute to the sustainable development of their chosen accommodation.

4.3 Data analysis

The two data sets obtained from survey 1 and survey 2 were merged into a single database using the email address as a primary key in the SPSS Statistical Analytics Programme version 20. The merged database was created in order to compute and correlate the answers before and after staying at the hostels using statistical analysis.

The surveys consisted of a single mandatory question at the beginning of the survey (about participants' hostel), and all the other questions were optional. Hence, some participants chose to skip some of the questions and this explains some missing values in some of the fields. This approach has enabled the respondents to complete everything that applies to their situation, but at the same time there is a possibility that respondents skipped by mistake or were intentionally answering only some of the questions.

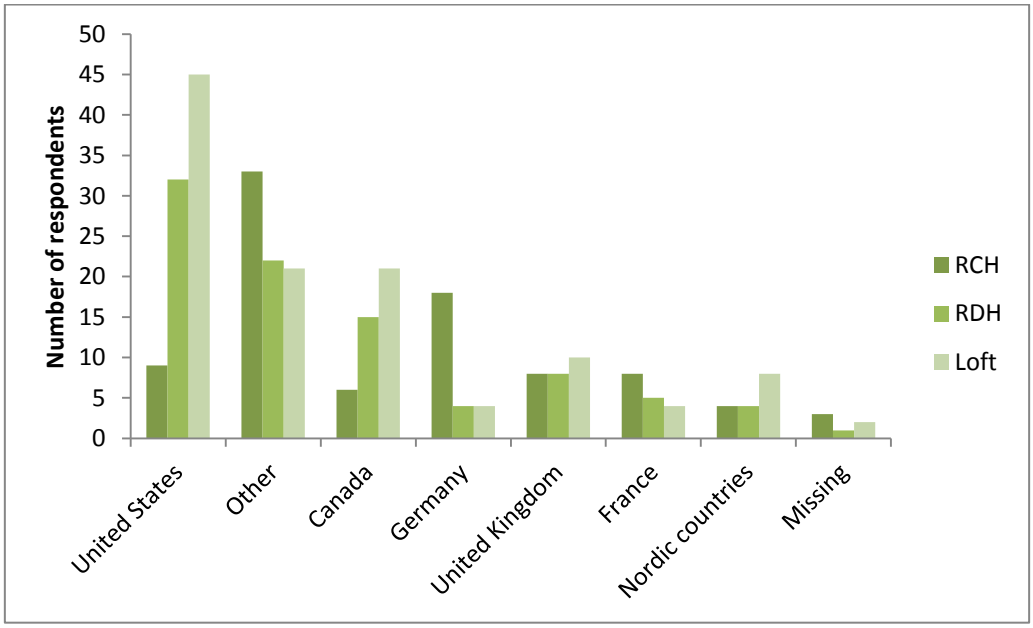
In the SPSS program, several analytical options were used to analyse the two surveys: descriptive statistics to observe the answers distribution across data using measures of central tendency (i.e. mean) and cross-tabulations and custom tables were used to analyze the relationships between two or more variables (i.e. answers from survey 1 and survey 2, the three hostels). The non-parametric test, K-independent sample Kruskal-Wallis was chosen for the purpose of this research as it is a rank-based test (Lærstatics, n.d.) used to determine if there are statistically significant differences between two or more variables (i.e. the three Reykjavík HI Hostels, gender). The test also compares nominal (i.e. the three hostels) and ordinal (i.e. ranking scales) variables and tests the distribution of association between the respondents' answers in survey 1 and survey 2. In addition, the Chi-Square (i.e. χ^2) procedure (Boston University, n.d.) was used to compare the distribution of responses, or the proportions of participants in each response category (i.e. among the respondents of the three hostels, between the behaviour of respondents at home and at the hostel).

The P-value is shown in tables to represent the observed statistical significance. Thus, $P \leq .05$ indicates that there are statistically significant differences among the variables (i.e. less than one in twenty chance of being wrong) and $P \leq .01$ represents less than one in a hundred chance of being wrong. Furthermore, variables are statistically highly significant at $P \leq .001$ and $P \leq .0001$ (Mann, 2010; StatsDirect, n.d.). In the context below the P-value is presented in tables as * = $P \leq .05$; ** = $P \leq .01$; and *** = $P \leq .001$. The standard deviation (SD) is also shown as it is a measure used to quantify the amount of variation (i.e. a standard deviation close to 0 indicates that data tends to be very close to the mean, while a higher deviation represents that data are spread out over a wider range of values) (Statistics, n.d.).

5 Results

5.1 Participants' demographic background

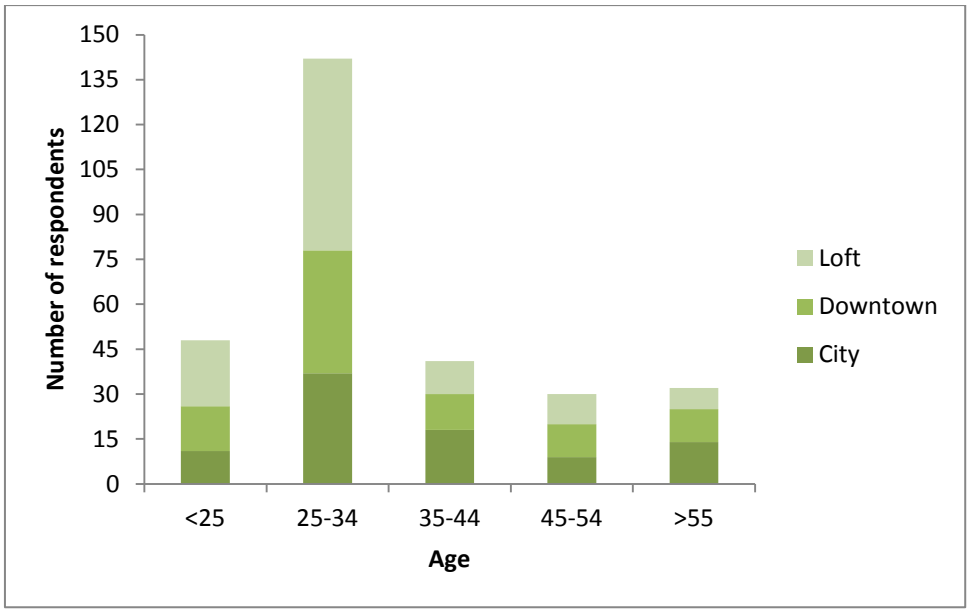
The majority of participants who took part in the study are from the United States of America (USA) (29%), followed by Canada (14%), Germany and the United Kingdom (UK) (9% each) and France (6%). Respondents from the Nordic countries (i.e. Denmark, Norway and Sweden) are put together, counting as 5%. Countries with participants fewer than 5% have been grouped in 'other' with 26% and 2% count as missing as the respondents did not specify their country of origin (Figure 5-1). There is a statistical significance regarding the countries distribution per each hostel ($p \leq .05$). This indicates that from the total amount of respondents from the United States, the proportion of participants staying at Loft and Downtown is higher than the proportion at City. Also, City seems to host a higher proportion of participants from diverse countries than Downtown and Loft. Moreover, the proportion of participants from Germany is much higher at City compared to Downtown and Loft.



USA (N=86); Other (N=76); Canada (N=42); Germany (N=26); UK (N=26); France (N=17); Nordic countries (N=16); Missing (N=6).

Figure 5-1 Main countries of origin of participants and distribution per each hostel.

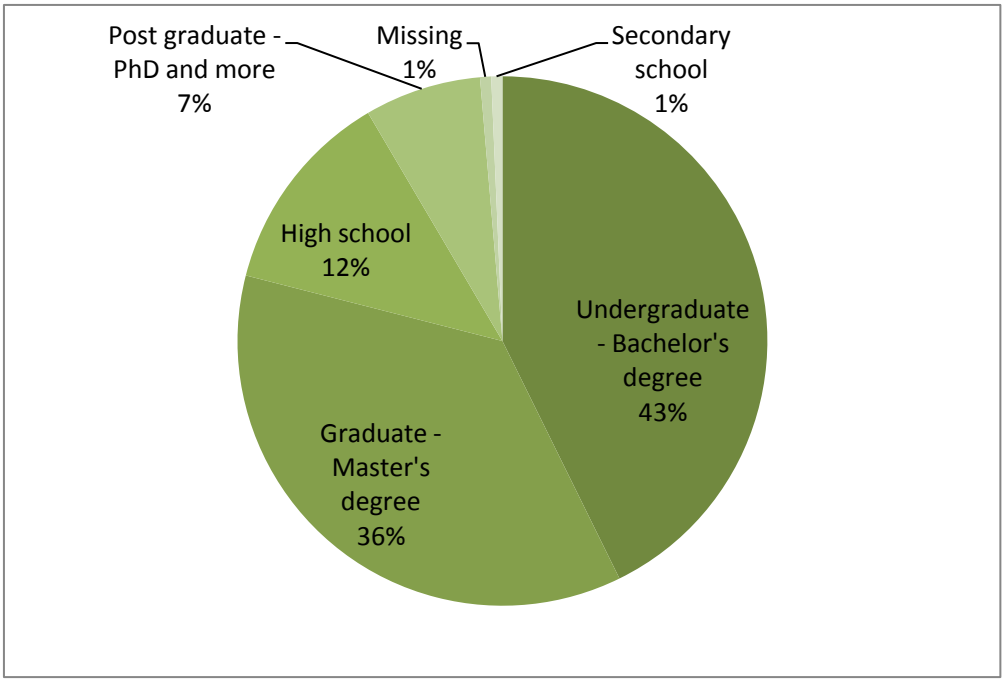
Almost half of the respondents (48%) are between 25 and 34 years old, followed by 16% younger than 25. A total of 14% are between 35 and 44 years old, 11% are over 55 and 10% are between 45 and 54 years old (Figure 5-3). There is a statistical difference regarding the age distribution per hostel ($p \leq .01$), showing that from the total amount of respondents between 25 and 34 years old, the proportion of young people staying at Loft Hostel is higher than the proportion at City and Downtown (Figure 5-2).



<25 (N=48); 25-34 (N=142); 35-44 (N=41); 45-54 (N=30); >55 (N=32).

Figure 5-2 Age distribution per each hostel.

There is no statistical significance regarding the distribution of participants' education per each hostel, thus the results are being counted together (Figure 5-3). A total of 43% of participants have completed undergraduate studies, 36% have completed graduate studies, 12% have finished high school and 7% have post graduate studies. Less than 1% have completed secondary school and another 1% of participants did not answer the question.



Undergraduate (N=126); *Post graduate (N=21);*
Graduate (N=107); High school (N=37); *Secondary school (N=2); Missing (N=2).*

Figure 5-3 Participants' highest level of education completed.

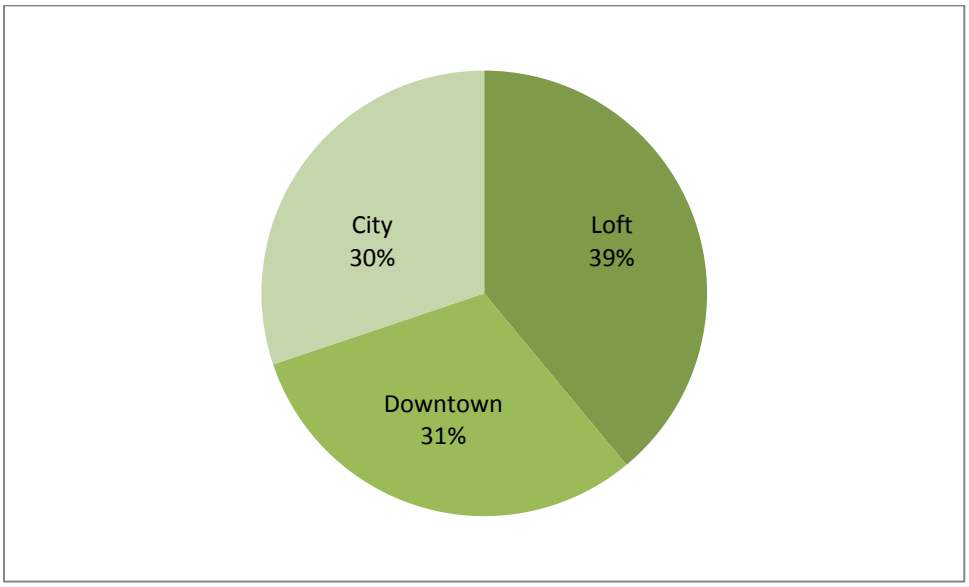
The majority of respondents are females (63%) (Table 5-1) and males are 37%. This confirms Sax's study that females are more receptive to take part in online studies (Sax, Gilmartin & Bryant, 2003).

Table 5-1 Gender distribution at each hostel

	City		Downtown		Loft		Total	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Male	36	40	30	33	43	37	**109**	**37**
Female	53	60	61	67	72	63	**186**	**63**
Total	**89**	100	**91**	100	**115**	100	**295**	**100**

$\chi^2 = 1.097$; $p = .58$.

The distribution of responses per hostel is fairly homogeneous counting as 39% for Loft, 31% for Downtown and 30% for City (Table 5-1; Figure 5-4). The Chi-Square test on the cross-tabulation between hostels and gender shows there are no statistically significant differences between the gender distributions for each hostel ($p > .05$). This indicates that the three hostels are consistent and comparable among each other.

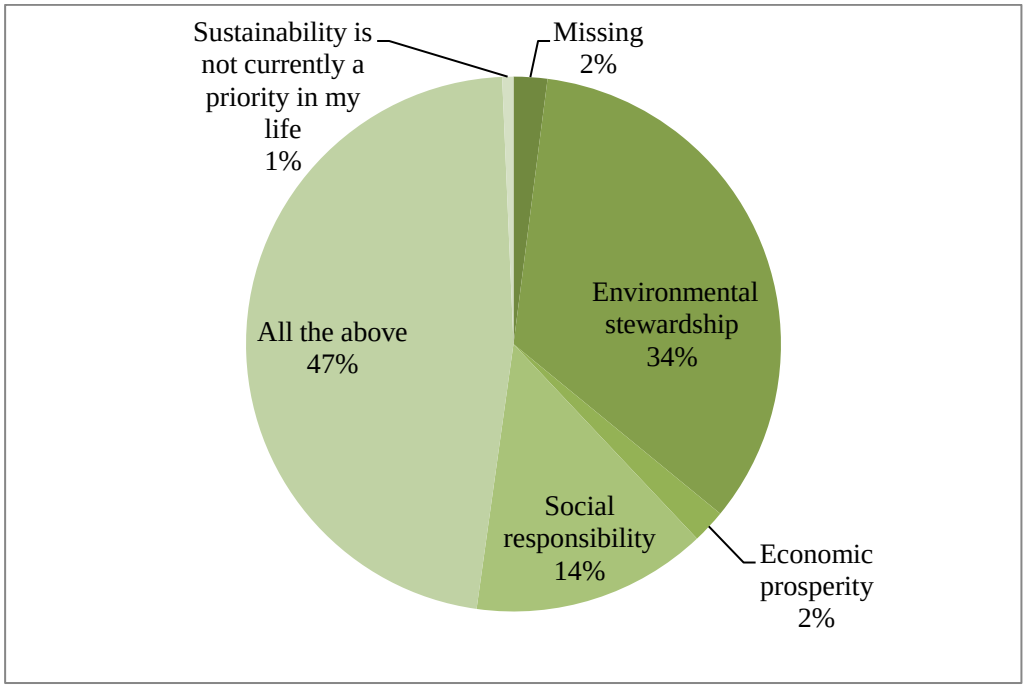


Loft (N=115); Downtown (N=91); City (N=89).

Figure 5-4 Distribution of responses per hostel.

5.2 Information and education

In order to assess participants' understanding of the concept of 'sustainability' they were asked what the concept means to them (Table 5-5). The answer choices were based on the three main pillars of sustainable development adapted to the tourism field i.e. 'environmental stewardship', 'social responsibility', 'economic prosperity', 'all the above' and 'sustainability is not currently a priority in my life'. The results show that most of the participants have a good understanding of the 'sustainability' concept and are familiar with the three main pillars representing it. Thus, 47% selected the 'all the above' response, while for 34% 'sustainability' is defined as 'environmental stewardship' only, 14% selected 'social responsibility' and 2% selected 'economic prosperity'. Only 1% of participants selected that 'sustainability is not currently a priority in their lives' and 2% did not answer this question.



All the above (N=139); *Social responsibility (N=42);*
Environmental stewardship (N=100); *Economic prosperity (N=6);*
Sustainability is not a priority in my life (N=6).

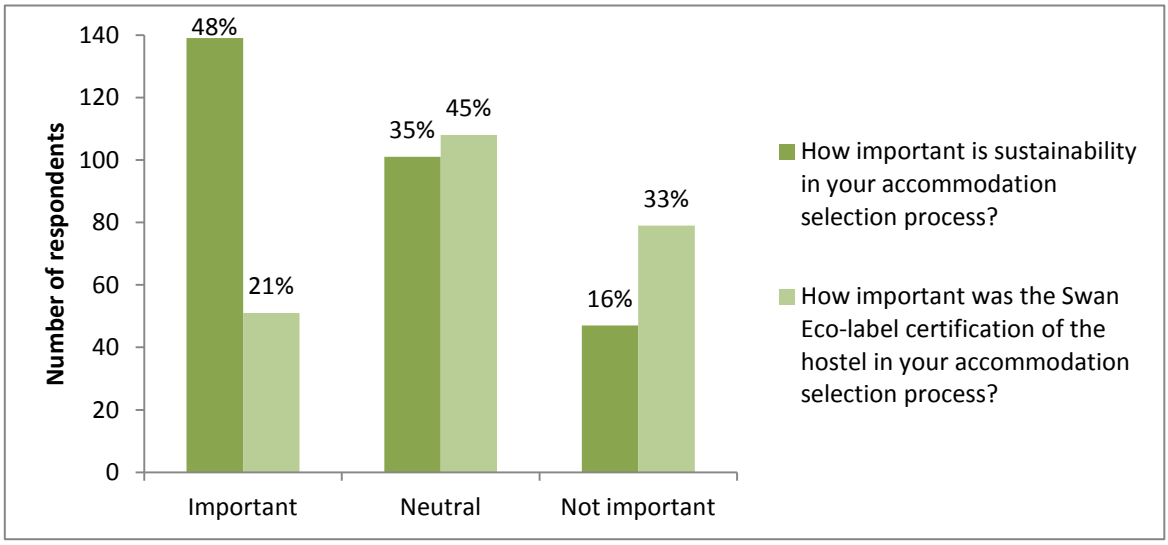
Figure 5-5 Participants' understanding of the concept of 'sustainability'.

The participants were also asked about the importance of sustainability in their accommodation selection process and also about the Swan Eco-label in particular (Table 5-2). There is no statistically significant difference ($p > .05$) between the answers given by the guests staying at the three Reykjavík Hostels. Thus, the answers are being counted together (Figure 5-6).

Table 5-2 Statistical significance between the three Reykjavik HI Hostels on sustainability.

	City		Downtown		Loft		χ^2	p
	N	Mean	N	Mean	N	Mean		
How important is sustainability in your accommodation selection process?	85	3.45	90	3.24	112	3.36	1.62	.44
How important was the Swan Eco-label certification of the hostel in your accommodation selection process?	67	2.90	75	2.65	96	2.67	2.08	.35

The results show (Figure 5-6) that 48% of respondents consider sustainability to be important in their selection process of accommodation, 35% say it's neutral and for 16% it is not important. However, when asked about the Nordic Ecolabel (i.e. the Swan Eco-label in the survey) in particular, only 21% consider the Ecolabel to be important in their selection process of accommodation, while 45% are neutral and 33 % do not consider it to be important. This indicates that although most of the respondents consider sustainability to be important, they may not know about the Nordic Ecolabel in particular, as also reflected in a few of the comments left in the open-ended final question: "Coming from the US and booking most of my accommodations online, I did not know about Swan Eco-Labels or anything like that. What determined where we stayed was mostly availability because we planned the trip last minute and Sorry I don't know anything about the Swan eco-label. And I spend only a very short time at the hostel and also in Reykjavik, so I didn't know anything about a sustainable effort the hostel would do, and I bought absolutely no food in the capital and I was unaware of 99% of the issues you discussed here". One reason might be that the Swan is a Nordic Ecolabel and only 5% of participants in this research are from the Nordic Countries (Figure 5-2).



Answers are ranked with a five-point scale from 'Not important at all' (=1) to 'Very important' (=5) and grouped into the Top2Box and Lower2Box method.

Figure 5-6 Importance of sustainability and Nordic Ecolabel in the selection process of accommodation.

In order to assess the reasons behind participants' actions and potentially find a correlation between them, they were asked to select from several statements the ones that apply to them. The answers ranked as 'Yes' below signify that they have been selected by the participants while the answers ranked as 'No' have not been selected, meaning that participants do not identify with the statement.

The results in Table 5-3 show that the majority of participants in the study are interested in information related to topics such as sustainability, sustainable development and environment. A total of 64% (*N*=185) and 39% (*N*=116) have even participated in social movements and actions to support environmental causes. More than half, 54% (*N*=158) have signed petitions with sustainability related characteristics and 40% (*N*=117) have donated money to support non-governmental organization. Moreover, the majority of participants in the study are not only familiar with the concept of 'sustainability' but 74% (*N*=218) declared that they are familiar with the meaning of eco-certified products and services and 63% (*N*=186) are also familiar with the principles of sustainable tourism. Only 2% (*N*=7) of respondents selected that none of the statements in the study applied to them. There is a small statistically significant relationship showing that the participants from City and Downtown are more likely to be interested in information related to sustainability/sustainable information while participants from Loft seem to show less interest. Also, participants from Downtown seem to be more inclined to financially support non-governmental organizations that fight for a clean environment.

Table 5-3 Statements related to participants' sustainability-related information at home.

Statements related to information and education at home		**City**		**Downtown**		**Loft**		**Mean**
		N	**%**	**N**	**%**	**N**	**%**	**%**
I am interested in information related to sustainability/sustainable development/environment related topics[1)]	No	25	28	33	36	52	45	
	Yes	64	**72***	58	**64***	63	**55***	64
I have participated in social movements/actions to support environmental causes[2)]	No	54	61	54	59	71	62	
	Yes	35	**39**	37	**41**	44	**38**	39
I have signed petitions with sustainability related characteristics (e.g. save endangered species, protect the Amazon forest, eliminate child labour etc.[3)]	No	41	46	45	49	51	44	
	Yes	48	**54**	46	**51**	64	**56**	54
I have donated money to support non-governmental organizations that fight for a clean environment[4)]	No	56	63	45	49	77	67	
	Yes	33	**37***	46	**51***	38	**33***	40
I am familiar with the meaning of eco-certified products or services[5)]	No	28	31	24	26	25	22	
	Yes	61	**69**	67	**74**	90	**78**	74
I am familiar with the meaning and principles of sustainable tourism[6)]	No	38	43	28	31	43	37	
	Yes	51	**57**	63	**69**	72	**63**	63
None of these[7)]	No	87	98	90	99	111	97	
	Yes	2	**2**	1	**1**	4	**3**	2

[1)] χ^2 (2)= 6.35, p = .04; *[4)] χ^2 (2)= 6.86, p = .03;* *[6)] χ^2 (2)= 2.76, p = .25;*
[2)] χ^2 (2)= 0.12, p = .94; *[5)] χ^2 (2)= 2.46, p = .29;* *[7)] χ^2 (2)= 1.25, p = .54.*
[3)] χ^2 (2)= 0.54, p = .76;

While staying at the hostels (Figure 5-4), a total of 64% (*N*=186) have noticed the Sustainability Policy of the hostels, while only 8% (*N*=22) have donated at the hostels for the Icelandic Environment Association and only 5% (*N*=15) took part in the events happening at the hostels. The low participation rate in events is understandable since they take place irregularly, during evenings. However, only 21% (*N*=62) mentioned that they know what the Swan Eco-label certification which justifies the results above about the low importance participants gave to this aspect when selecting the accommodation place. There is no statistical significance between the distributions of responses per hostel, which indicates the distribution is similar.

Table 5-4 Statements related to information at the hostels.

Statements related to information at the hostels		City		Downtown		Loft		Mean
		N	%	N	%	N	%	%
I have read/seen the Sustainability Policy of the hostel[1)]	No	32	36	26	29	51	44	64
	Yes	57	**64**	65	**71**	64	**56**	
I have donated at the hostel for Landvernd - the Icelandic Environment Association to protect the Icelandic nature[2)]	No	83	93	84	92	106	92	8
	Yes	6	**7**	7	**8**	9	**8**	
I took part in the eco-events offered by the hostel (green documentaries, Swap events, workshops from recycled candles etc.) [3)]	No	85	95	87	96	108	94	5
	Yes	4	**5**	4	**4**	7	**6**	
I know what the Swan Eco-label certification stands for[4)]	No	68	76	71	78	94	82	21
	Yes	21	**24**	20	**22**	21	**18**	

[1)] χ^2 (2)= 5.48, p = .07;
[2)] χ^2 (2)= 0.96, p = .95;
[3)] χ^2 (2)= 0.39, p = .82;
[4)] χ^2 (2)= 0.93, p = .73.

A crosstab between the two sets of statements showed some interesting findings (Table 5-5). It seems that from those participants who are generally interested in information related to sustainability/sustainable development/environment related topics; 41% also read the Sustainability Policy of the hostels and 12% also know what the Nordic Ecolabel certification stands for. Moreover, participants that stated they are familiar with the meaning of eco-certified products (19%) and principles of sustainable tourism (16%) are also more likely to know what the Nordic Ecolabel is.

Also, the results show that respondents who stated that they participate in social movements to support environmental causes, sign petitions with sustainability related characteristics, donate money to support non-governmental organizations (NGO's) and are familiar with the meaning of eco-certified products and services, are also more likely to donate money to the Icelandic Environment Association to protect the Icelandic nature while staying at the Reykjavík Hostels.

Table 5-5 Crosstab between information-related statements at home and while staying at the hostels. Interesting findings highlighted in green.

Statements		I have read/seen the Sustainability Policy of the hostel				I have donated at the hostel for the Icelandic Environment Association to protect the Icelandic nature				I know what the Swan Eco-label certification stands for			
		No		Yes		No		Yes		No		**Yes**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
I am interested in information related to sustainability/sustainable development/environment related topics	No	45	15	65	**22**	104	35	6	**2**	84	29	**26**	**9**
	Yes	**64**	22	**121**	**41**	169	57	16	**5**	**149**	**51**	**36**	**12**
I have participated in social movements/actions to support environmental causes	No	74	25	105	**36**	171	58	8	**3**	145	49	**34**	**12**
	Yes	**35**	12	**81**	**28**	**102**	**35**	**14**	**5**	**88**	**30**	**28**	**10**
I have signed petitions with sustainability related characteristics (e.g. save endangered species, protect the Amazon forest, etc.	No	54	18	83	**28**	130	44	7	**2**	113	38	**24**	**8**
	Yes	55	19	103	**35**	143	49	**15**	**5**	120	41	**38**	**13**
I have donated money to support non-governmental organizations that fight for a clean environment	No	70	24	108	**37**	**169**	**57**	**9**	**3**	141	48	**37**	**13**
	Yes	39	13	78	**26**	**104**	**35**	**13**	**4**	92	31	**25**	**9**
I am familiar with the meaning of eco-certified products or services	No	32	11	45	**15**	72	24	5	**2**	70	24	**7**	**2**
	Yes	77	26	141	**48**	201	68	17	**6**	163	55	**55**	**19**
I am familiar with the meaning and principles of sustainable tourism	No	51	17	58	**20**	98	33	11	**4**	95	32	**14**	**5**
	Yes	**58**	**20**	**128**	**43**	**175**	**59**	**11**	**4**	**138**	**47**	**48**	**16**

5.3 Waste management

The chapter introduces first the results regarding the participants' frequency of practices related to waste-management at home and also while staying at the hostels. The chapter also includes a crosstab between the two behaviours, which is done in order to identify if there is any behavioural change during participants' stay at the hostels.

The following sub-chapter presents the results regarding participants' satisfaction with the waste reduction practices at the hostels and concludes with several statements that participants were asked to select that they identified with.

5.3.1 Frequency of practices related to waste

All answers from the three Reykjavik HI hostels have been counted together since there is no statistically significant difference in the response distributions among the hostels.

In this way, the results show (Table 5-6) that participants generally reported having good practices to reduce their waste at home and the majority of respondents (93%) stated that they recycle at home. A total of 77% stated that they donate their old clothes or books to charity instead of throwing them away. Also, about 41% of participants stated that they usually buy in bulk to minimize their waste and 72% declared that they usually bring their own bags when shopping.

Table 5-6 Frequency of practices related to waste management at home.

Rankings on waste behaviour at home	Usually		Sometimes		Rarely		Mean
	N	%	N	%	N	%	
I recycle at home	269	93	11	4	10	3	4.5
I donate old clothes or books to charity	226	77	46	16	20	7	4.1
I buy in bulk/big packages to avoid waste	118	41	103	36	65	23	3.7
I bring my own bags when I shop	208	72	55	19	27	9	3.9

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method.

While at the hostels (Table 5-7), the majority of participants (88%) stated that they used the recycling facilities provided by the hostels. In total, 48% used the free food baskets in the guest kitchen while a total of 52% have rarely done so. About 8% used the traveller's basket while only 3% took part in a 'clothes' swap' event at the hostel which is understandable since the event is organized monthly or every three weeks (A. Grad and D. Đula, EVS volunteers, personal communication, August 9, 2015).

Table 5-7 Frequency of practices related to waste management at the hostels.

Rankings on waste behaviour at the hostels	Usually		Sometimes		Rarely		Mean
	N	%	N	%	N	%	
I have used the recycling facilitates at the hostel	256	88	17	6	17	6	4.4
I have used the free food baskets in the Guest kitchen	91	34	37	14	141	52	2.6
I have used the swap books shelf at the hostel	9	12	8	9	229	78	1.7
I have used the traveller‘s /Red cross basket at the hostel	21	8	15	6	203	86	1.5
I took part in a clothes swap event	32	3	24	3	203	77	1.3

Answers are ranked with a five-point scale from ‘Never’ (=1) to ‘Always’ (=5) and grouped into the Top2Box and Lower2Box method.

When associating the participants’ recycling behaviour at home and while staying at the hostels, the results show that a large majority of respondents (83%) stated that they recycle both at home and at the hostels. It is noteworthy that 10% of respondents who stated that they usually recycle at their homes only rarely or sometimes used the recycling facilities at the hostel, and only 5% used the recycling facilities more at the hostels than at their home (Table 5-8).

Table 5-8 Crosstab between participants’ recycling behaviour at home and at the hostels.

		I recycle at home			
		Rarely	**Sometimes**	**Usually**	**Total**
		N	**N**	**N**	**N**
I used the recycling facilities at the hostel	**Rarely N**	3	2	**12**	17
	Sometimes N	1	1	**15**	17
	Usually N	**6**	**8**	**237**	251
	Total	10	11	264	285
		2% (N=6) recycle rarely at home, but usually at the hostel	**3% (N=8)** recycle sometimes at home and usually at the hostel	**83% (N=237) r**ecycle both at home and at the hostel **10%(N=27)** recycle usually at home, rarely and sometimes at the hostel	**5% (N=14)** positively changed their behaviour

5.3.2 Guests' satisfaction with the waste reduction practices at the hostels

Participants in the study are generally satisfied with the availability of free toiletries left by other guests and offered free by the hostels (43%) (Table 5-9). A total of 51% are satisfied with the free food baskets in the guest kitchen. In total, only 22% are satisfied with the clothes swap/travellers' baskets and 47% said they did not know about this service at the hostels or they have not used it. Perhaps participants did not notice the service since it is located in only one place in the buildings. Also, about 28% of participants did not know or have not used the free toiletries and 27% were not aware of the free food baskets options available at the hostels.

Table 5-9 Participants' satisfaction with the waste reduction practices at the hostels.

Guests' satisfaction with waste reduction methods	**Satisfied**		**Neutral**		**Dissatisfied**		**I don't know/NA**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Free toiletries left by other guests (soap, shampoo, shower gel, etc.)	127	43	78	27	7	2	81	28
Free food baskets in the guest kitchen	150	51	58	20	7	2	79	27
Clothes Swap/Travellers' basket	65	22	85	29	4	1	139	47

Answers are ranked with a five-point scale from 'Very dissatisfied' (=1) to 'Very satisfied' (=5) and grouped into the Top2Box and Lower2Box method. Answers marked as 'I don't know' are also shown because of the high frequency for this particular category.

The low standard deviation (Table 5-10) shows that the answers are close to the mean, reflecting that the majority of participants gave similar answers to the three response options.

Table 5-10 Mean and std. deviation on participants' satisfaction with the waste reduction practices at the hostels

	Free Toiletries left by other guests	**Free Food baskets in the Guest Kitchen**	**Clothes Swap/ Travellers Basket**
N	293	294	293
Missing	2	1	2
I don't know*****	81	79	139
Mean	3.78	3.98	3.55
SD	0.871	0.927	0.825

*******The 'I don't know' answers were not included in the mean and std. deviation calculation to avoid statistical skew.*

5.3.3 Statements

The statements related to waste management are mainly based on recycling since it is usually the most well known procedure. The answers ranked as 'Yes' below signify that the statements apply to the participants and have been selected while the answers ranked as 'No' have not been selected, meaning that participants do not identify with the statement.

The results show that while only 3% selected that they do not think about recycling while travelling (Table 5-11), a majority of 84% believe that recycling facilities should be available everywhere. There is no statistically significant difference in the response distribution between the three hostels.

Table 5-11 Statements related to recycling.

Statements related to recycling		City		Downtown		Loft		Mean
		N	%	N	%	N	%	%
I do not think about recycling while travelling	No	88	99	88	97	110	96	
	Yes	1	1	3	3	5	4	3
I believe recycling facilities should be available everywhere	No	14	16	17	19	14	12	
	Yes	75	84	74	81	101	88	84

5.4 Energy conservation

The chapter introduces the results showing participants' rankings related to their energy conservation practices at home and while staying at the hostels. It continues with the second sub-chapter and presents participants' satisfaction regarding the energy conservation measures available at the three hostels. This sub-chapter also makes an association between participants' behaviour at home and at the hostels. The final sub-chapter presents several statements related to the topic, out of which the participants have been asked to select the ones that apply to them.

5.4.1 Frequency of practices related to energy conservation

The majority of respondents (86%) use energy saving practices at home (Table 5-12), 11% do it sometimes and 2% rarely do so. Also, a total of 73% declared that they purchase energy saving equipment when possible, 21% do it sometimes and 3% rarely do so.

Table 5-12 Frequency of practices related to energy conservation of participants at home.

Frequency of energy conservation practices at home	Usually N	Usually %	Sometimes N	Sometimes %	Rarely N	Rarely %	Mean
I use energy saving practices at home (e.g. switching off lights, using stand-by mode for TV/computer/laptop, filling in the washing machine and/or dishwasher before turning on, covering pots while cooking etc.)	251	86	32	11	7	2	4.29
I purchase energy saving equipment when possible (e.g. light bulbs, fridge, washing machine, low emission vehicle, green energy etc.)	214	73	61	21	10	3	4.0

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method.

When it comes to participants' practices at the hostels (Table 5-13), most of the respondents or 93% did switch off the lights during their stay, and only 4% did it sometimes, 1% rarely and 2% do not know or it is not applicable. Also, a high number of respondents did not know or have not used the washing (66%) and dishwashing machines (67%). About 46% did cover the pots while cooking which may indicate that participants do not know that this practice saves energy.

Table 5-13 Frequency of practices related to energy conservation at the hostels.

Frequency of energy conservation practices at the hostels	Usually N	Usually %	Sometimes N	Sometimes %	Rarely N	Rarely %	I don't know/NA N	I don't know/NA %	Mean
Switching off lights	271	93	12	4	4	1	5	2	4.63
Filling in the washing machine before turning on	63	22	10	4	26	9	190	66	3.56
Filling in the dishwashing machine before turning on	64	22	8	3	22	8	195	67	3.7
Covering pots while cooking	132	46	23	8	15	5	119	41	4.14

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method. The 'I don't know or Not Applicable?' is also shown as the frequency on this answer is very high. The mean has been calculated on the five-point scale only to avoid statistical skew.

When analyzing the energy conservation practices of participants at home and while staying at the hostels by associating the statements 'I use energy saving practices at home' and the frequency of 'switching off lights (at the hostels)' (Table 5-14), it was found that 84% of those who stated it that they conserve energy at home sometimes, have conserved

at the hostel usually. Also 1% of participants that rarely use energy saving practices at home stated that they usually switched off the lights while at the hostels. This may indicate that 10% of participants positively changed their behaviour while at the hostels.

Table 5-14 Crosstab between energy conservation practices at home and while staying at the hostels.

			I use energy saving practices at home			
			Rarely N	**Sometimes N**	**Usually N**	**Total N**
Switching off lights (at the hostels)	**Rarely**	**N**	2	0	2	4
	Sometimes	**N**	1	5	6	12
	Usually	**N**	**4**	**26**	**236**	266
	Total		7	31	244	282
			1% (N=4) conserve energy at home rarely and usually at the hostel	**9% (N=26)** conserve energy sometimes at home and usually at the hostels	**84%(N=236)** conserve energy both at home and at the hostels	**10% (N=30)** positively changed their behaviour

5.4.2 Guests' satisfaction regarding the energy conservation practices at the hostels

Results in Table 5-15 show that the majority of participants are 'Very Satisfied' or 'Satisfied' with the energy conservation reminders and information, saving lights and sensors, thus the Top2Box method was used to better illustrate the participants' level of satisfaction. The Kruskal-Wallis test shows that there is no statistical significant difference between the three hostels ($p > .05$) meaning that the overall satisfaction of participants regarding the energy conservation practices in all three locations is similar.

Table 5-15 Guests' satisfaction with the energy conservation practices at the hostels.

Top2Box	**City**		**Downtown**		**Loft**		χ^2	**p**	**Total**
	N	**%**	**N**	**%**	**N**	**%**			**N**
Energy conservation reminders/information	75	90	76	89	88	86	0.74	.69	239
Energy saving lights	68	87	75	90	98	92	1.05	.59	241
Sensors	62	90	64	86	92	86	0.64	.73	218

5.4.3 Statements

The statements follow the same principles as the indicators above, and the answers ranked as 'Yes' below signify that they were selected by the participants while the answers ranked as 'No' were not selected, indicating that participants do not identify with the statement.

The results show that only 3% (*N*=9) of participants selected that they do not think about energy conservation while travelling and only 3% (*N*=7) believe that Iceland does not need energy conservation measures. However, a majority of 90% (*N*=265) believe that energy conservation habits should be adopted by everyone (Table 5-16) as also reflected by participants' practices both at their home and at the hostels.

Table 5-16 Statements related to energy.

Statements related to energy		City		Downtown		Loft		Mean
		N	%	N	%	N	%	%
I do not think about energy conservation while travelling	No	88	99	89	98	109	95	
	Yes	1	**1**	2	**2**	6	**5**	**3**
I believe Iceland does not need energy conservation measures	No	86	97	89	98	113	98	
	Yes	3	**3**	2	**2**	2	**2**	**3**
I believe energy conservation habits should be adopted by all	No	8	9	11	12	11	10	
	Yes	81	**91**	80	**88**	104	**90**	**90**

5.5 Water conservation

The chapter presents the results related to participants' frequency of water conservation practices at home and while staying at the hostels. It also presents a crosstab between these practices. Moreover, the chapter introduces the results regarding participants' satisfaction rate with the water conservation practices and facilities at the hostels. Similarly with the chapters above, it concludes with several statements connected to water conservation.

5.5.1 Frequency of practices related to water conservation

The majority of participants or 66% reported practicing water conservation habits at home (Table 5-17), while 22% stated that they only do so sometimes and 12% stated that they rarely conserve water at home. When it comes to purchasing water saving appliances, 39% stated that they usually purchase such equipment, 23% stated that they only do so sometimes and 24% stated that they rarely do so. These numbers are understandable since such equipment is bought rarely and lasts for many years. Moreover, the high rate of young participants in the study may indicate that those participants are less likely to be responsible of purchasing such equipment in their household.

Table 5-17 Frequency of practices related to water conservation at home.

Frequency of water conservation practices at home	Usually		Sometimes		Rarely		Mean
	N	%	N	%	N	%	
I conserve water at home (consciously taking shorter showers, closing tap while brushing teeth etc)	190	66	65	22	34	12	3.77
I purchase water saving appliances (toilets with two flushes, saving water taps or shower heads)	114	39	67	23	70	24	3.28

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method.

While staying at the hostels (Table 5-18), the majority of participants reported adopting water conservation practices, declaring that they have consciously tried to conserve it. In total, 68% of participants stated that they have consciously flushed the toilets using the double flush, while 19% stated that they did so only sometimes and 10% that they rarely do so. Moreover, 59% stated that they consciously took shorter showers, while 25% did so only sometimes and 14% rarely. The majority of participants (87%) stated that they closed the water tap while brushing their teeth, 7% did so sometimes and 5% rarely did so. A total of 82% said that they have consciously tried to not waste water in their general actions, 13% have done so sometimes and 3% only rarely.

Table 5-18 Frequency of practices related to water conservation at the hostels.

Frequency of water conservation practices at the hostels	Usually		Sometimes		Rarely		Mean
	N	%	N	%	N	%	
Consciously flushing the toilet using the double flush	198	68	54	19	28	10	3.98
Consciously took shorter showers	172	59	75	25	40	14	3.69
Consciously closed the water tap while brushing the teeth	253	87	20	7	16	5	4.48
Consciously tried to not waste water in my actions	239	82	37	13	10	3	4.23

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method.

When analyzing the water conservation practices of participants at home and while staying at the hostels by associating the statements 'I conserve water at home' and 'I consciously tried to not waste water in my actions at the hostel' (Table 5-19), it was found that 7% of those who stated that they rarely conserved water at home conserved at the hostel usually. Moreover, 16% of those who stated that they conserve water rarely at home declared that they usually conserved water at the hostel. This may indicate that 23% of participants positively changed their behaviour while at the hostels.

Table 5-19 Crosstab between water conservation practices at home and while staying at the hostels.

			I conserve water at home			
			Rarely	**Sometimes**	**Usually**	**Total**
			N	**N**	**N**	**N**
Consciously tried to not waste water in my actions (at the hostel)	**Rarely**	**N**	6	3	1	10
	Sometimes	**N**	7	13	15	35
	Usually	**N**	**19**	**46**	**171**	236
	Total		32	62	187	281
			7% (N=19) conserve usually at the hostel and rarely at home	**16% (N=46)** conserve usually at the hostel and sometimes at home		**23% (N=65)** positively changed their behaviour

5.5.2 Guests' satisfaction with the water conservation practices at the hostels

When it comes to participants' satisfaction regarding water conservation practices in all three hostels, the Kruskal-Wallis test shows that there is no significant statistical difference between the three hostels ($p > .05$) meaning that the overall satisfaction of participants is distributed alike. The majority of participants are 'Very Satisfied' or 'Satisfied' with the water conservation reminders and information, toilets with double flush and the water flow of the shower heads and water taps. Thus the Top2Box method has been used to illustrate the participant's level of satisfaction of the water conservation practices (Table 5-20).

Table 5-20 Guests' satisfaction with the water conservation practices at the hostels

Top2Box	**City**		**Downtown**		**Loft**		χ^2	**p**	**Total**
	N	**%**	**N**	**%**	**N**	**%**			**N**
Water conservation reminders/information	54	76	61	76	76	78	2.24	.33	248
Toilets with double flush	70	89	77	90	94	90	1.09	.58	269
Water flow of shower heads	70	86	73	85	97	92	0.95	.62	273
Water flow of water taps	72	88	78	90	97	91	0.26	.88	276

5.5.3 Statements

Results in Table 5-21 show that an average of 82% (*N*=241) of participants from the three hostels stated that they conserve water to protect the environment, while almost a third or 29% (*N*=85) stated that they conserve water because it is expensive. Only 6% (*N*=17) selected that they do not think about water conservation while travelling and 3% (*N*=9) believe Iceland does not need water conservation measures. Also, 55% (*N*=161) declared that they kept their showers short and effective, while 14% (*N*=40) reported that they enjoy taking long showers regardless of the place where they are. These results are similar with responses in the open-ended final question, where a participant experiences a discrepancy between the practices and information available at the hostels and the situation in Reykjavík or the information received from the tour guides "Regarding the water: The hostel did have reminders near every faucet and water source to conserve. However, around the city of Reykjavik I would see water being wasted to clean streets and hoses left running. Also the tour guides would talk about how nice the hot warm showers are in Iceland so it made me feel like indulging. The point I am trying to make is that while the hostel seemed to support water saving the city did not and that mixed message was confusing as a visitor".

There is no statistically significant difference between the response distributions for the three Reykjavík hostels meaning that the answers across the hostels are in line.

Table 5-21 Statements related to water.

Statements related to water		City		Downtown		Loft		Mean
		N	%	N	%	N	%	%
I conserve water to protect the environment[1)]	No	13	15	19	21	22	19	
	Yes	76	**85**	72	**79**	93	**81**	**82**
I conserve water because it is expensive[2)]	No	65	73	65	71	80	70	
	Yes	24	**27**	26	**29**	35	**30**	**29**
I do not think about water conservation while travelling[3)]	No	84	94	84	92	110	96	
	Yes	5	**6**	7	**8**	5	**4**	**6**
I believe Iceland does not need water conservation measures[4)]	No	87	98	89	98	110	96	
	Yes	2	**2**	2	**2**	5	**4**	**3**
I keep my showers short and effective[5)]	No	35	39	45	49	54	47	
	Yes	54	**61**	46	**51**	61	**53**	**55**
I enjoy taking long showers no matter where I am[6)]	No	84	94	75	82	96	83	
	Yes	5	**6**	16	**18**	19	**17**	**14**

[1)] χ^2 (2)= 1.27, p = .53; *[3)] χ^2 (2)= 1.05, p = .59;* *[5)] χ^2 (2)= 2.04, p = .36;*
[2)] χ^2 (2)= 0.29, p = .86; *[4)] χ^2 (2)= 1.07, p = .59;* *[6)] χ^2 (2)= 6.91, p = .32.*

5.6 Transportation

The chapter presents the results related to participants' frequency of transport both at home and while staying at the hostels. The second sub-chapter presents respondents' satisfaction with the transport-related information provided by the hostels. The third sub-chapter concludes with several statements that participants identified with.

5.6.1 Frequency of practices related to transportation

Results in Table 5-22 show that a significant number of participants (46%) reported that they usually reduce the CO_2 emissions resulting from their activities at home while 33% only do so sometimes, and 14% stated that they rarely try to do so. When it comes to using the bike to go to work, 23% stated that they usually use it, 12% use it sometimes and a total of 56% rarely use it. However, 46% stated that they usually use the public transport, 25% use it sometimes and 25% rarely use it. Only 21% stated that they walk to work on a regular basis, another 21% walk sometimes to work but the majority of 49% stated that they rarely do so. Also, 29% declared they usually use the car to commute, 22% said they do so sometimes and the majority or 49% stated that they rarely use the car in their regular activities.

Table 5-22 Frequency of transport-related practices of participants at home.

Frequency of transport-related practices at home	Usually		Sometimes		Rarely		Mean
	N	%	N	%	N	%	
I try to reduce the CO_2 emissions resulted from my activities at home	134	46	95	33	40	14	3.43
I use the bike to go to work	67	23	34	12	160	56	2.30
I use the public transport	133	46	72	25	73	25	3.35
I walk to work	59	21	59	21	137	49	2.42
I use the car wherever I go	83	29	62	22	139	49	2.60

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method.

When it comes to participants' transportation behaviour while staying at the hostels and travelling (Table 5-23), 39% declared that they usually shared a car with others, 12% shared only sometimes, 23% have rarely shared a car with others and for 25% the option was not applicable. This indicates they probably did not use a car during their stay in Reykjavík. Only 5% stated that they rented a bike to explore the city regularly and also another 5% used a bike sometimes while the majority or 55% rarely used it. For 36% of participants the option was not applicable. However, the majority of respondents or 85% stated that they walked to and from the hostel, 10% sometimes did so and 2% selected the

answer rarely or never. Also, 31% declared that they usually used the public transport and 20% did so sometimes, while 32 rarely used it.

The majority of respondents or 66% stated that they were not engaged in planting of vegetation activities as a measure to offset their CO_2 emissions or the option was not applicable for them. Despite this, 2% (*N*=5) stated that they have usually done so while another 2% (*N*=5) selected sometimes.

Table 5-23 Frequency of transport-related practices while travelling.

Frequency of transport-related practices at the hostel	**Usually**		**Sometimes**		**Rarely**		**I don't know**		**Mean**
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	
I shared a car with others	111	39	35	12	65	23	72	25	3.39
I used the bike to go around the city	13	5	13	5	154	55	102	36	1.47
I walked to and from the hostel	244	85	28	10	9	3	5	2	4.40
I used the public transport in Reykjavík	88	31	57	20	93	32	50	17	2.87
I rented a car and used it when needed	101	35	19	7	92	32	75	26	2.92
I planted trees or other vegetation	5	2	5	2	188	66	89	31	3.56

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method. The 'I don't know or Not Applicable' is also shown as the frequency on this answer is very high. The mean has been calculated on the five-point scale only to avoid statistical skew.

When comparing the transport-related behaviour at home and while travelling (Table 5-24), it seems that from those who stated that they rarely or only sometimes walk to work, 86% stated that they usually walked to and from the hostels while staying in Reykjavík. Moreover, walking seems to be the participants' most preferred way to commute during their holidays.

Table 5-24 Crosstab between transportation practices at home (S1) and while travelling (S2).

		(S1) I use the bike to go to work			
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I used a bike to go around the city	**Rarely N**	90	17	**33**	140
	Sometimes N	7	2	4	13
	Usually N	6	2	5	13
	Total N	103	21	42	166

		(S1) I walk to work			
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I walked to and from the hostel	**Rarely N**	5	1	2	8
	Sometimes N	13	7	5	25
	Usually N	**113**	**47**	**49**	209
	Total N	131	55	56	242

		(S1) I use the public transport			
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I used the public transport in Reykjavík	**Rarely N**	26	**24**	**40**	90
	Sometimes N	11	19	24	54
	Usually N	**22**	**20**	40	82
	Total N	59	63	104	226

		(S1) I use the car wherever I go			
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I have shared a car with others	**Rarely N**	26	16	21	63
	Sometimes N	15	6	14	35
	Usually N	60	24	21	105
	Total N	101	46	56	203

5.6.2 Guests' satisfaction with the transport-related practices at the hostels

The Kruskal-Wallis test shows that there is no statistically significant difference between the answers of participants at the three hostels ($p > .05$) regarding the response distribution on transport-related practices. This indicates that the overall satisfaction of transport-related practices is similar among the hostels (Table 5-25; Table 5-26). Thus, the Top2Box and Lower2Box methods were used to illustrate the participants' level of satisfaction. The results show that the majority of respondents either did not know about the service or they did not use the car sharing board, bike rental service or the eco-driving tips. However, over 50% of participants in each hostel are satisfied with the information about the public transportation provided by the hostels.

Table 5-25 Guests' satisfaction with the transport-related practices at the hostels.

		City		**Downtown**		**Loft**		
		N	**%**	**N**	**%**	**N**	**%**	**Mean**
Car sharing board	Satisfied	25	**29**	16	**18**	19	**17**	3.48
	Neither/Nor	15	17	19	21	31	27	
	Dissatisfied	3	4	2	2	2	2	
	Don't know/NA	43	**50**	53	**59**	61	**54**	
Bike rental service	Satisfied	21	**24**	10	**11**	21	**19**	3.43
	Neither/Nor	13	15	19	21	29	26	
	Dissatisfied	5	6	2	2	2	2	
	Don't know/NA	48	**55**	59	**66**	61	**54**	
Information about public transport	Satisfied	67	**78**	46	**52**	65	**58**	4.00
	Neither/Nor	7	8	15	17	17	15	
	Dissatisfied	3	4	7	8	6	5	
	Don't know/NA	9	**11**	21	**24**	25	**22**	
Eco-driving tips	Satisfied	22	**26**	12	**14**	24	**21**	3.58
	Neither/Nor	13	15	18	20	29	26	
	Dissatisfied	3	4	2	2	1	1	
	Don't know/NA	47	**55**	57	**64**	59	**52**	

Answers are ranked with a five-point scale from 'Very dissatisfied' (=1) to 'Very satisfied' (=5) and grouped into the Top2Box and Lower2Box method. The 'I don't know or Not Applicable' answer is also shown as the frequency on this answer is quite high. The Mean has been calculated on the five-point scale only to avoid statistical skew.

Table 5-26 Statistical interpretation on transport-related practices at the hostels.

	Car sharing board	Bike rental service	Information about public transport	Eco-driving tips
χ^2	0.83	2.09	0.18	2.05
df	2	2	2	2
p	.66	.35	.92	.36

5.6.3 Statements

Participants were asked to choose the statement that applies to them when it comes to the most convenient price-quality means of transport. A total of 54% (*N*=159) selected that they do not consider environmental or social aspects in this regard. However, 45% (*N*=134) of participants stated that they do look for the most sustainable transportation mean when they travel, taking into account its economic, social and environmental aspects. There is no statistical difference between the three hostels ($p > .05$), meaning that the response distribution per each hostel is similar (Table 5-27).

Table 5-27 Statements related to transportation.

Statements		City		Downtown		Loft		Mean
		N	%	N	%	N	%	%
When I travel I chose what I find to be the most convenient price-quality transportation mean without considering its environmental or social aspects[1)]	No	43	48	45	49	48	42	
	Yes	46	**52**	46	**51**	67	**58**	**54**
When I travel I chose what I find to be the most sustainable transportation mean (considering its economic, social and environmental aspects)[2)]	No	47	53	49	54	65	57	
	Yes	42	**47**	42	**46**	50	**43**	**45**

[1)] χ^2 (2)= 1.47, p = .48; *[2)] χ^2 (2)= 0.31, p = .86.*

5.7 Purchasing of chemicals and consumables

The chapter introduces the results related to participants' frequency of purchasing eco-certified chemicals and consumables at their household. The results showing participants' usage of the eco-certified consumables offered at the hostels is also shown. However, no association is done in this chapter and no statements were provided since such items are less likely to be purchased while travelling. Hence, less emphasis was put on this aspect. However, the last sub-chapter presents the participants' satisfaction with the eco-certified consumables offered by the three hostels.

5.7.1 Frequency of practices related to purchasing eco-certified chemicals and consumables

Results indicate (Table 5-28) that 40% of participants stated that they purchase eco-certified consumables regularly at home, while another 40% purchase such products sometimes and 18% rarely do so. When it comes to eco-certified cleaning chemicals, 39% stated that they usually purchase them for domestic use, while 39% said they do so sometimes and 20% rarely purchase such products. Moreover, 18% declared to usually use home-made or alternative ways of cleaning at home, while 31% stated that they do so sometimes and a total of 50% rarely do so.

Table 5-28 Frequency of practices related to the purchasing of eco-certified chemicals and consumables of participants at home.

Frequency of purchasing eco-certified chemicals and consumables at home	Usually		Sometimes		Rarely		Mean
	N	%	N	%	N	%	
I purchase eco-certified consumables at home (toilet paper, hand or kitchen towels, hand soap, dish soap, etc.)	117	40	116	40	54	18	3.25
I purchase eco-certified cleaning chemicals at home (e.g. disinfectant, bathroom/floor/stove, cleaners, etc.)	112	38	113	39	58	20	3.13
I use home-made/alternative chemicals for cleaning (e.g. vinegar, sodium bicarbonate, etc.)	51	18	91	31	145	50	2.49

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method.

While staying at the hostels, the majority of participants (83%) stated that they used the eco-consumables available (Table 5-29). However, 13% used them sometimes and 1% seems to rarely use them during their stay.

Table 5-29 Participants' frequency of usage of eco-certified chemicals and consumables of while staying at the hostels.

Frequency of usage of eco-consumables at the hostels	Usually		Sometimes		Rarely		Mean
	N	%	N	%	N	%	
I have used the eco-consumables at the hostel (toilet paper, hand towels, hand soap, etc.)	240	83	37	13	3	1	4.42

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method.

5.7.2 Guests' satisfaction with the eco-certified consumables at the hostels

The majority of participants are satisfied with the quality of eco-certified consumables offered by the hostels (Table 5-30). Over 80% of guests are satisfied with the quality of the toilet paper, which is recycled from tetra pak and has a brownish colour (S. Ólafsdóttir, Manager Reykjavík HI Hostels, personal communication, July 13, 2015) and, over 70% of respondents are satisfied with the quality of the hand towels and hand soap. Over 45% of customers in all three hostels declared they did not know or they have not used the laundry facilities at the hostels. There is no significant statistical difference between the response distributions for each hostel (Table 5-31) which indicates that the response distributions are similar.

Table 5-30 Guests' satisfaction with the eco-certified consumables at the hostels.

		City		**Downtown**		**Loft**		**Mean**
		N	**%**	**N**	**%**	**N**	**%**	
Eco-certified toilet paper	Satisfied	72	**83**	76	**84**	91	**81**	4.17
	Neither/Nor	6	7	5	6	6	5	
	Dissatisfied	1	1	6	7	12	11	
	Don't know/NA	8	9	3	3	4	4	
Eco-certified hand towels	Satisfied	67	**77**	71	**79**	87	**77**	4.25
	Neither/Nor	4	5	5	6	10	9	
	Dissatisfied	2	2	2	2	3	3	
	Don't know/NA	14	16	12	13	13	12	
Eco-certified hand soap	Satisfied	65	**75**	72	**80**	94	**84**	4.27
	Neither/Nor	8	9	7	8	10	9	
	Dissatisfied	1	1	4	4	3	3	
	Don't know/NA	13	15	7	8	5	5	
Eco-certified dish soap	Satisfied	48	**55**	49	**54**	64	**57**	4.13
	Neither/Nor	9	10	8	9	14	12	
	Dissatisfied	1	1	2	2	4	4	
	Don't know/NA	29	**33**	31	**34**	31	**27**	
Eco-certified washing powder	Satisfied	32	**37**	25	**28**	44	**39**	3.96
	Neither/Nor	6	7	10	11	14	12	
	Dissatisfied	1	1	3	3	4	4	
	Don't know/NA	48	**55**	52	**58**	51	**45**	

Answers are ranked with a five-point scale from 'Very dissatisfied' (=1) to 'Very satisfied' (=5) and grouped into the Top2Box and Lower2Box method. The 'I don't know or Not Applicable' answer is also shown as the frequency on this answer is high. The Mean has been calculated on the five-point scale only to avoid statistical skew.

Table 5-31 Statistical interpretation of guests' satisfaction regarding eco-certified consumables at the hostels.

	Toilet paper	Hand towels	Hand soap	Dish soap	Washing powder
χ^2	2.84	1.21	.101	.81	2.84
df	2	2	2	2	2
p	.24	.55	.95	.67	.24
Total	275	251	264	199	139
Missing	20	44	31	96	156

5.8 Food and beverages

The chapter introduces participants frequency of practices related to the purchasing of food and beverages at home and while staying at the hostels and in Reykjavík. The second sub-chapter presents the results showing participants' satisfaction with the offer of products at the hostels.

5.8.1 Frequency of practices related to the purchasing of food and beverages

Results show (Table 5-32) that while staying at home, the majority of participants or 63% stated that they purchase in-season food, while 36% said they do so sometimes and 1% rarely do so. About 37% stated that they usually purchase organically produced products, 43% do so sometimes and 19% rarely do so. When it comes to purchasing fair trade products just 27% stated that they purchase them usually while the majority or 52% do so sometimes and 15% rarely or never. A third of respondents (30%) stated that they purchase non-genetically modified organisms (GMO) products usually, another 30% do so sometimes, 21% rarely do so and 20% are not aware of this aspect.

Table 5-32 Frequency of practices related to the purchasing of food and beverages at home

Behaviour related to food & beverages at home	Usually		Sometimes		Rarely		I don't know		Mean
	N	%	N	%	N	%	N	%	
I purchase local and in-season food while at home	185	**63**	105	**36**	2	**1**	0	**0**	3.78
I purchase organic products	109	**37**	127	**43**	53	**19**	2	**1**	3.25
I purchase fair trade products	78	**27**	151	**52**	45	**15**	17	**6**	3.15
I purchase non-GMO products	86	**30**	86	**30**	60	**21**	57	**20**	3.19

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method. The 'I don't know or Not Applicable' is also shown as the frequency on this answer is very high. The mean has been calculated on the five-point scale only to avoid statistical skew.

While staying in Reykjavík (Table 5-33), 49% of participants stated that they purchased in-season products available, 22% sometimes, 7% rarely or never did and 22% did not know about this aspect. A total of 28% participants stated that they purchased organic products on a regular basis, 21% sometimes, 24% rarely did so and 27% are not aware of this aspect. The situation is fairly similar in regards to purchasing fair trade and non-GMO products. In total 23% declared that they purchase fair trade products usually, 22% sometimes, 23% rarely and 32% didn't know. A similar percentage or 20% stated that they usually purchased non-GMO produced products, while another 20% purchased sometimes, 20% rarely and 40% are not aware if the products purchased were GMO free or not. There are no statistically significant differences between the respondents of the three hostels.

Table 5-33 Frequency of practices related to the purchasing of food and beverages while in Reykjavík.

Behaviour related to food & beverages in Reykjavík	**Usually**		**Sometimes**		**Rarely**		**I don't know**		**Mean**
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	
I purchased local and in-season food, fruits and vegetables	142	49	63	22	20	7	20	22	3.76
I purchased organic produce	80	28	62	21	70	24	78	27	3.04
I purchased fair trade produce	66	23	64	22	68	23	92	32	2.93
I purchased non-GMO produce	57	20	59	20	59	20	115	40	3.04

Answers are ranked with a five-point scale from 'Never' (=1) to 'Always' (=5) and grouped into the Top2Box and Lower2Box method. The 'I don't know or Not Applicable' is also shown as the frequency on this answer is very high. The mean has been calculated on the five-point scale only to avoid statistical skew.

Analysing the behaviours at home and while travelling in regards to the purchasing of food products, it seems that a bigger percentage of participants were not aware what kind of products they purchase or they are not checking whether the products are organic, fair-trade or non-GMO. Not being aware of what products are in-season is understandable since travellers may not be aware about Iceland's possibility to produce in-season products and what they are. Moreover, from those participants who did rank their purchasing behaviour from 'usually' to 'rarely', it seems that no major differences are noticed between their purchasing behaviour at home and while travelling (Table 5-34).

Table 5-34 Crosstab between purchasing behaviour at home (S1) and while travelling (S2).

(S1) I purchase local and in-season food at home					
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I purchased local and in-season food, fruits and vegetables	**Rarely N**	0	11	8	19
	Sometimes N	0	28	**34**	62
	Usually N	1	**35**	**105**	141
	Total N	1	74	147	222

(S1) I purchase organic products at home					
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I purchased organic products	**Rarely N**	26	24	17	67
	Sometimes N	5	42	**15**	62
	Usually N	6	**20**	**54**	80
	Total N	37	86	86	209

(S1) I purchase non-GMO products at home					
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I purchased non-GMO products	**Rarely N**	21	12	12	45
	Sometimes N	12	26	**15**	53
	Usually N	4	**14**	**33**	51
	Total N	37	52	60	149

(S1) I purchase fair trade products at home					
		Rarely N	**Sometimes N**	**Usually N**	**Total N**
(S2) I purchased fair trade products	**Rarely N**	22	33	9	64
	Sometimes N	8	44	**10**	62
	Usually N	2	**22**	**41**	65
	Total N	32	99	60	191

5.8.2 Guests' satisfaction with the availability and selection of food and beverages at the hostels

Participants in the study are generally satisfied with the hostels' selection and offer of local/ organic/ fair trade food and beverages (Table 5-35). There is no statistically significant difference between the response distributions for the three hostels and the responses are counted together. An average of 37% (*N*=108) of participants are satisfied with the selection of food and beverages at the hostels, while another 38% (*N*=109) do not know or the answer does not apply to them, meaning that most likely they did not use the breakfast service at the hostels. About 20% (*N*=59) are neither satisfied nor dissatisfied while 5% (*N*=13) are dissatisfied with the hostels' offer of food and beverages.

Table 5-35 Guests' satisfaction and statistical interpretation regarding the selection and availability of local/organic/fair trade selection of food and beverages at the hostels.

		City		Downtown		Loft		Mean
		N	%	N	%	N	%	
Availability of local/organic/ fair trade selection of food & beverages	Satisfied	33	38	29	32	46	41	3.71
	Neither/Nor	16	19	18	20	25	22	
	Dissatisfied	7	8	5	6	1	1	
	Don't know/NA	30	35	38	42	41	36	

Statistical interpretation	χ^2	df	p	Total	Missing
	1.72	2	.42	180	115

Answers are ranked with a five-point scale from 'Very dissatisfied' (=1) to 'Very satisfied' (=5) and grouped into the Top2Box and Lower2Box method. The Mean has been calculated on the five-point scale only to avoid statistical skew.

5.8.3 Statements

Participants were also asked to choose the statements that apply to them with regards to food and beverages (Table 5-36). A total of 88% (*N*=257) stated that they like to consume local and traditional food when they travel, while only 15% (*N*=46) selected that they usually purchase the products they like without checking their country of origin. There is no statistical difference between the three hostels ($p > .05$), meaning that the response distributions per each hostel are similar.

Table 5-36 Statements related to food and beverages.

Statements		City		Downtown		Loft		Mean
		N	%	N	%	N	%	%
I usually like to consume local and traditional food when I travel[1)]	No	10	11	8	9	20	17	
	Yes	79	**89**	83	**91**	95	**83**	88
I usually purchase the products I like without checking their country of provenience[2)]	No	78	88	76	84	95	83	
	Yes	11	**12**	15	**16**	20	**17**	15

[1)] χ^2 *(2) = 3.66, p = .16;* [2)] χ^2 *(2) = 1.04, p = .59.*

5.9 Respondents' opinion to the open-ended questions

5.9.1 Would you like to add other sustainable practices of yours that were not covered in this survey? Open-ended question in Survey 1

A few respondents (9%, *N*=26) answered the final open-ended question in the first survey. Their answers covered topics such as, having a vegetarian or vegan lifestyle, the habit of reusing materials, using low emissions means of transportation (i.e. biking to work, walking, combining errands) and growing their own food and composting.

Some of them consider that by being a vegetarian or vegan they have a lower impact on the environment "I don't eat meat, which is often the largest part of people's CO_2 footprint"; and because "The production of meat, and the resulting treatment of animals, is destroying the planet, as well as our humanity".

A noteworthy category of respondents are those who reuse materials with the purpose of reducing their impact on the environment, saving money and doing social good "recycling of used electronic objects, lower consumption of plastic bags, no fast food and no "coffees to go" (less packaging garbage)"; "I rebuild / recycle electronics and fix them instead of throwing them away and buying new one" and "to reuse containers and other items as much as possible". Several respondents also mentioned giving away or borrowing items as a sustainable practice "I take well-conserved toys of my kids to the Green Point of my town hall to be re-used or I give them to my friends or charity".

Other respondents mentioned that they have implemented several sustainable practices in their household by focusing on measures that enable them to be self-sufficient "we live in an ecological built house, green-roof, reused concrete, sun-collector for hot-water supplying, biological paint"; "home composting, growing your own food, native landscaping, rain collection for plant watering"; "grow my own vegetables"; "growing own food" and "not certain whether backyard composting fits the questions regarding recycling organics".

5.9.2 Would you like to add something else? Open-ended question in Survey 2

Participants in the second part of the study (12%, *N*=34) added additional comments which were grouped into three main categories: compliments, Nordic Ecolabel and various comments and suggestions.

The 'compliments' section shows that guests staying at the three Reykjavík Hostels notice and appreciate the sustainable practices and information available at the hostels "this was my first visit to Iceland and I was pleasantly surprised by the recycling options and water saving information. It did feel very 'eco' and encouraged me to adopt these practices at home in England. We do recycle... but not on this scale!" The compliments also noted the commitment of the staff working at the hostels in presenting the hostels' sustainable practices to their customers "I really enjoy my stay at Downtown Reykjavik Hostel. The staff team is super excellent. They are willing to help me and gave me some good advice. The facilities are convenient and eco-certified. The idea of sharing free food is great! Many people did take advantage of the free food, including me. And I took some photos of my free meal. Really appreciated; some even kindly reminded me that I could enjoy their free food. In this case, the kitchen became a warm place. I had more chats in this cosy kitchen with others when having my meals. I really wish that I could go back SOON. The Downtown Hostel became my SWEET home in Reykjavik. Thank you very much" and "Loft Hostel is amazing, had the best stay there! A shining example of how hostels should be".

The comments in the 'Nordic Ecolabel' category also reflect the results showing that although sustainability is not much included in participants' selection of an accommodation place, they do appreciate the practices available "I have never had a hostel provide so many eco-sustainable options. Although it isn't typically included in my decision process when researching hostels, I greatly appreciated it once I got there and I think the City hostel did very well with the eco things, much better than many hostels I have seen so far". Although one participant mentions his appreciation of the Nordic Ecolabel and practices "I appreciated the Swan eco-label certification and sustainability practices being used very much!" a few other participants declared that they did not know about the ecolabel. Thus, the comments also complement the results showing that many participants do not know what the Nordic Ecolabel is "Sorry I don't know anything about the Swan eco-label. And I spend only a very short time at the hostel and also in Reykjavik, so I didn't know anything about a sustainable effort the hostel would do, and I bought absolutely no food in the capital"; "Did not know about it until after I booked! Thank you!" and "What is the 'Swan Eco-label certification? You should add a link in the survey with an explanation"; "I was unaware of 99% of the issues you discussed here" and "If the Loft provides these eco-friendly items and services, I was not told".

Participants in the study also have valuable feedback, categorized in 'various comments and suggestions' such as "While the toilet paper is eco-friendly, it was certainly not gentle body parts friendly. I hope it worked for others despite the fact it was a disaster in my case and I had to resort to using tissues instead".

Although a few participants also mention their limited stay at the hostel, comments show their willingness to contribute to this research "We only stayed for one night, arriving very

late, leaving in the morning. So we did not use many of the things you are asking about. So the answers are not very specific. Although I hope we could help you".

5.10 Major findings

5.10.1 Likeliness to take part in sustainable activities

Three statements were extracted from the 'waste management', 'water conservation' and 'energy conservation' chapters as they were deemed to reflect participants' likeliness to take part in the hostels' sustainable practices. Special emphasis was put on these three statements since the indicators they represent, i.e. waste, water and energy, represent limit values in the Nordic Ecolabel criteria. This means that in order to be awarded the Nordic Ecolabel certification, the establishment needs to fulfil the energy limit value and another limit value of the applicant's choice (i.e. water or waste) (Nordic Ecolabel, n.d.b). As in the previous sections, the answers below ranked as 'Yes' signify that they were selected by the participants while the answers ranked as 'No' were not selected.

The results show (Table 5-37) that the majority of respondents are likely to take part in the sustainable activities of their accommodation place if facilities and/or information are in place. A total of 80% (*N*=238) from all respondents said they are likely to recycle if facilities are available, 68% (*N*=202) are likely to conserve water and 72% (*N*=212) are likely to conserve energy if there is information encouraging them to do so.

The Kruskal-Wallis test shows that there is a statistically significant difference ($p < .05$) between the three hostels regarding the statement 'likely to recycle'. The results show that the response distribution is different among hostels. Thus, respondents from Loft (88%, *N*=101) seem to be more likely to recycle compared with participants from Downtown (77%, *N*=70) and City (75%, *N*=67). Also, regarding the likeliness to conserve water, the distribution between the three hostels is statistically significant at $p < .01$. This indicates that respondents from City (56%, *N*=50) are less likely to conserve water compared with the participants from Downtown (73%, *N*=66) and Loft (75%, *N*=86) (Table 5-36).

Table 5-37 Likeliness to take part in sustainable activities.

Statements likeliness		**City**		**Downtown**		**Loft**		**Mean**
		N	**%**	**N**	**%**	**N**	**%**	**%**
I am likely to recycle if facilities are available[1)]	No	22	25	21	23	14	12	
	Yes	**67**	**75***	**70**	**77***	**101**	**88***	**80**
I am likely to conserve water if there is information encouraging me to do so[2)]	No	39	44	25	27	29	25	
	Yes	**50**	**56****	**66**	**73****	**86**	**75****	**68**
I am likely to conserve energy if there is information encouraging me to do so[3)]	No	32	36	27	30	24	21	
	Yes	**57**	**64**	**64**	**70**	**91**	**79**	**72**

[1)] $\chi^2(2) = 6.23, p = .044;$
[2)] $\chi(2) = 9.01, p = .011;$ [3)] $\chi^2(2) = 5.78, p = .056.$

5.10.2 Participants' preference when selecting an accommodation place

When asked what they look at when selecting an accommodation place (Figure 5-7), about 95% (*N*=281) of participants mentioned the location, followed by price with 84% (*N*=249), online reviews from other guests 79% (*N*=232), recommendations from people they know 35% and social aspects/happenings at the place 25% (*N*=103). A total of 22% (*N*=65) selected the sustainable practices of the accommodation, 7% (*N*=6) mentioned social media and 2% (*N*=6) added additional comments (i.e. "bicycle friendly; easy to contact/quick answers by email; I like hostels because of the feeling you have there"; "lockers for personal belongings, continental breakfast, airport shuttles"; "overall impression"; "I prefer youth hostels or other hostels*"*). A previous study by Firth and Ning (1999) on backpackers hostels, where guests were asked to rank the importance of self-nominated factors when choosing a hostel, found that price was ranked first by 37% of respondents, followed by location with 27% and services and facilities provided with 15%. Only 3% ranked implementation of eco-friendly practices in a hostel as the most important factor influencing their choice (Firth & Hing, 1999). Berckley (2012) also claims that few tourists select sustainable products specifically as they expect good environmental management routinely while innovation and adoption are critical in order to improve social and environmental performance across the entire tourism sector. Current results show that although the interest in sustainability has increased, this aspect is still considered of less importance compared with the location and price.

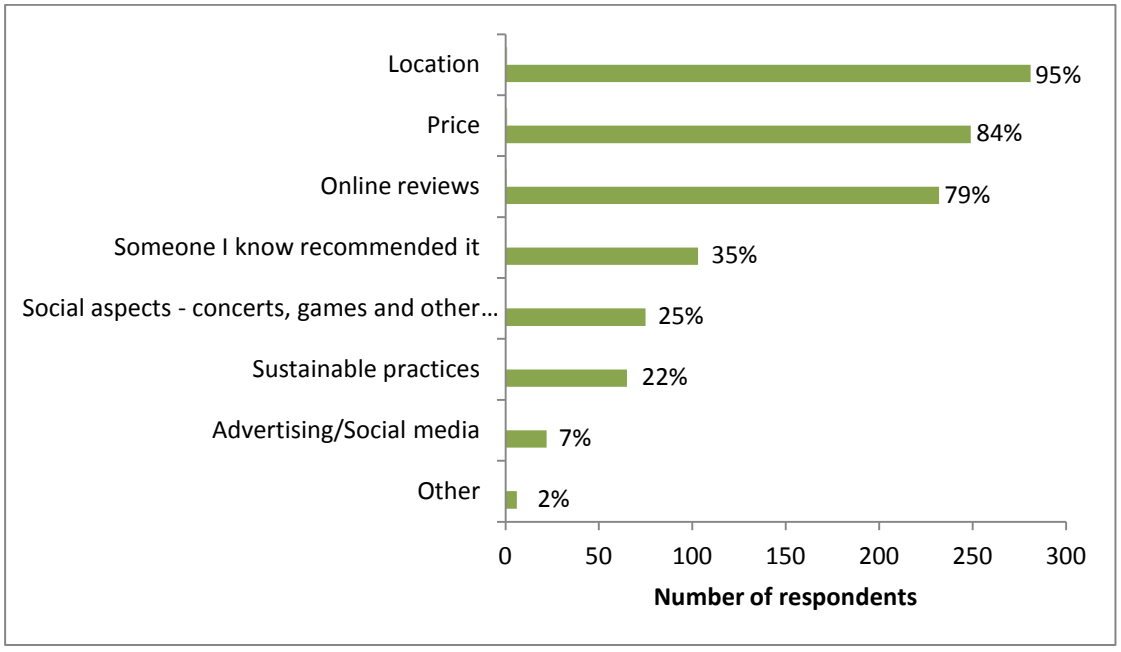


Figure 5-7 Participants' preference when selecting an accommodation place.

5.10.3 Participants' willingness towards sustainability-related practices

The results show (Table 5-38) that the majority of respondents or 64% stated that they are likely to change their behaviour to minimize the environmental aspects associated with their everyday actions. Also, 44% stated that they are likely to pay a higher price for local

products to support the local economy while a total of 43% are moderately willing to pay a higher price for eco-certified products or services. Moreover, 50% of respondents are willing to initiate new eco-procedures at their private household after experiencing the sustainable practices at the three Reykjavik HI hostels. This indicates that one in two persons may be willing to positively change their behaviour towards more sustainable practices when returning home. The Kruskal-Wallis test found no statistically significant differences between the three hostels.

Table 5-38 Willingness to take part in sustainability-related practices.

Questions	**Very willing**		**Moderately willing**		**Slightly willing**		**Mean**
	N	**%**	**N**	**%**	**N**	**%**	
How willing are you to change your lifestyle to reduce/minimize the environmental impacts associated with your everyday actions?[1)]	**185**	64	93	32	12	4	3.8
How willing are you to pay a higher price for local products to support the local economy?[2)]	**129**	44	125	43	36	12	3.42
How willing are you to pay a higher price for eco-certified products or services?[3)]	**114**	39	125	43	50	17	3.28
How willing are you to initiate new eco-procedures at your private household after experiencing the sustainable practices at the hostel?[4)]	**143**	50	101	35	43	15	3.46

[1)] χ^2 (2) =1.92, p = .38;
[2)] χ^2(2) = 2.74, p = .25;
[3)] χ^2 (2) = 0. 68, p = .71;
[4)] χ^2 (2) = 0. 83, p = .66.

Answers are ranked with a five-point scale from 'Not willing at all' (=1) to 'Extremely willing' (=5) and grouped into the Top2Box and Lower2Box method.

Although previous research (Kalafatis, Pollard, East, & Tsogas, 1999) also shows that by becoming more aware of the environmental problems, customers are also becoming more eco-conscious, seeking eco-certified products and services, the price seems to be an impediment when making such decisions. A respondent' comment in the open-ended question in the present study believes that eco-certified products and services should actually result in lower prices and sustainability should be part of everyone's life "Why should anyone have to pay more for eco-certified products or services? If anything, we should pay less because of the reduced environmental footprint. It is the mindset of people that needs to change and I don't think charging more for eco-certification is going to do that - indeed, I think it will keep a large sector of the population away from using such products and services because of the higher price point. Let's make sustainability part of everyone's everyday life and not just for those who can afford the higher price point that comes with eco-certification".

When it comes to the gender distribution, data shows that female participants are more willing than male participants to change their life-styles to reduce their environmental impacts; and more willing to pay higher prices to support the local economy and for eco-certified products and services. They are also more willing to initiate new eco-procedures at home after staying at the hostels (Table 5-39).

Table 5-39 Gender distribution on participants' willingness.

	Very willing (N)		**Moderately willing (N)**		**Slightly willing (N)**	
	M*	**F****	**M**	**F**	**M**	**F**
How willing are you to change your lifestyle to reduce/minimize the environmental impacts associated with your everyday actions?	61	**124**	36	57	9	3
How willing are you to pay a higher price for local products to support the local economy?	48	**81**	42	83	16	20
How willing are you to pay a higher price for eco-certified products or services?	37	**77**	45	80	24	26
How willing are you to initiate new eco-procedures at your private household after experiencing the sustainable practices at the hostel?	41	**102**	40	61	25	18

**M=Male; **F=Female.*

6 Discussion and Conclusions

6.1 The importance of sustainability and eco-labelling when selecting an accommodation place

Answering the research question 'How important is sustainability and ecolabelling in the selection process of an accommodation place?' the results are in accordance with previous results (Kalafatis et al., 1999; Firth & Ning, 1999). Thus, the price still seems to be the main impediment when seeking eco-certified products and services. However, the results also reflect what Havas (2014) and Patterson (2000) pointed out, that future consumers worldwide have bigger future environmental expectations for themselves. Hence, 64% of guests in the current study are very willing to change their lifestyle to reduce the environmental impacts associated with their everyday actions. Havas (2014) also states that future customers will select more socially and environmentally responsible brands. As Patterson's (2000) study found, 55% of global consumers are willing to pay more for goods and services from companies engaged in programs to reduce negative social and environmental effects. The current results are in harmony with Patterson's research. Hence, 39% of participants are very willing to pay a higher price for eco-certified products and services and 44% are very willing to pay a higher price for local products to support the local economy of their destination.

The results of the current research show that almost half of the guests staying at the hostels (48%) stated that sustainability is important in their selection process of an accommodation place. However, only 21% mentioned the Nordic Ecolabel as being important in their selection process. This implies that although most of the respondents find sustainability to be important, they may not consider the Nordic Ecolabel important or, more likely, they did not know about this eco-certification in particular. Moreover, although customers' interest in sustainable practices of an accommodation place has increased since Firth and Ning's study in 1999; having such practices implemented at an establishment seems to rather be a pleasant surprise to find or an expectation and not a criterion when choosing a place. Accommodation establishments are thus encouraged to adopt sustainable practices as to meet future guests' expectations.

6.2 The potential of the accommodation sector to influence guests' behaviour towards more sustainable choices

Answering the research question 'How can the accommodation sector influence guests' behaviour towards more sustainable choices?', results show that guests are likely to maintain most sustainable practices they have at home during their travels. In this way, the associations between guests' sustainable actions at home and while staying at the hostels may be seen as an integrative part of their lifestyle and not as stand-alone concepts. However, more than maintaining their sustainable practices, results indicate that guests are likely to positively change their behaviour by following the encouragements and indications offered by the accommodation providers. Thus, 80% are likely to recycle if facilities are available, 68% are likely to conserve water and 72% are likely to conserve

energy if there is information encouraging them to do so. While previous research (Piper & Yeo, 2011) states that the understanding of the influence of eco-certification and ecolabelling on guests' behaviour and attitudes is limited; the current results seem to indicate that sustainable actions put in place because of ecolabelling, are likely to positively change guests' behaviour. Moreover, by following the indications provided by accommodation establishments, guests take direct part in the sustainable progress of their chosen accommodation.

A significant 50% (i.e. one in two guests) stated that they are likely to adopt new eco-procedures at their household after experiencing the sustainable practices at the hostels. This aspect may imply that while travelling, guests are more open and receptive to new initiatives. Although these findings require further follow up to assess the exact sustainable practices participants have implemented at their private household or lifestyles; they nevertheless indicate the potential of the accommodation sector to positively influence its guests' behaviour towards more sustainable choices.

Given the high rates of satisfaction with the sustainable practices offered by the hostels, accommodation establishments should seek to implement such practices first as an incentive to increase the quality offered and guests' satisfaction; and secondly, to potentially gain economic benefits.

6.3 Guests' contribution to the sustainable development of their accommodation

When it comes to the third research question 'How can guests contribute to the sustainable development of their chosen accommodation?' the results indicate that guests have the potential to contribute to the sustainable development of their accommodation by following the recommendations available at the establishment. Moreover, by taking an active stance and providing constructive feedback after their stay, guests are likely to encourage the accommodation management to respond to consumers' demands and improve their sustainable practices. Although the current results show that females are more likely and more willing to be interested and take part in the sustainable practices of their chosen accommodation, the results may be biased since 63% of the respondents in this research were females.

6.4 The role of the accommodation sector in sustainable tourism

What is the role of the accommodation sector in sustainable tourism? The results of the research support Charles's (2013) findings which highlighted the accommodation sector's need to take a more active stance in implementing sustainable practices. However, Charles's (2013) study is referring mainly to sustainable practices related to energy, water and waste. This study additionally stresses the need of the accommodation sector to take an active stance in all seven indicators presented in this research. Hence, apart from offering information and facilities related to waste, energy and water conservation; the accommodation sector should seek to purchase and offer its guests local, organic and fair trade food and beverages. Moreover, it should provide means of transportation and information that can reduce guests' CO_2 emissions, i.e. bicycles, the opportunity to share a

car on a car sharing board, and to actively encourage the use of local public transport. Furthermore, the accommodation establishments should actively display sustainability-related information, encouraging thus eco-consciousness and responsibility among customers. In addition, the accommodation providers should seek to offer eco-certified consumables and chemicals as to reduce their impact on the environment.

The results show that the study's objective is validated and the accommodation sector does have the potential to increase sustainability within tourism. This potential is twofold. Firstly, by implementing sustainable practices, accommodation establishments minimize their direct impact on the local soil and water, reducing the land alteration associated with them (Gössling, 2002; Chapin et al., 2000). Secondly, the results show that the accommodation sector has a greater potential, namely, to influence its customers' behaviour by offering facilities and information to encourage them to take part in sustainable practices. Such practices enable customers to take direct part in the sustainable development of their chosen accommodation, supporting at the same time the local economy and decreasing their direct impact on the local environment. By raising awareness about the principles of sustainable and responsible tourism, the accommodation sector is increasing the sector's resilience to changes and brings into perspective the aspects that brought visitors to that location in the first place.

Given the significant percentage (50%) of customers very willing to implement new eco-practices at home after experiencing the sustainable practices at the hostels, the accommodation sector may have the potential to spread eco-conscious behaviour across its guests. Moreover, by offering its guests the chance to take part in restoration and carbon sequestration initiatives through supporting local environmental NGOs, both customers and the establishment take an active stance in reducing erosion and congestion. In Iceland's case, such a positive contribution is in harmony with OECD's (2014) report that emphases on the country's need to develop comprehensive strategies and policies for land use, infrastructure and nature conservation. It is, therefore, assumed that guests can get inspired during their travels by the practices and information offered by their accommodation place. They may thus be more likely to adopt new sustainable practices in their lifestyle, as witnessed by respondents' results which showed that the majority of them stated that they are very willing to minimize the impact they have on the environment.

As the sustainability indicators used in the study could easily be applied to all kinds of accommodation types (i.e. hotels, guest houses, apartments, etc.), it is assumed that not only the hostels, but the entire accommodation sector has a great potential to increase sustainability within the tourism industry. Moreover, as the sustainable aspects were more important for guests than the Nordic Ecolabel certification, it can be assumed that accommodation establishments could implement the indicators without having an official eco-certification for their practices. If this is the case, the establishment will have to display and clearly support their practices in order to avoid potential 'greenwashing' (i.e. promoting false and misleading environmental marketing claims).

6.5 Future research

Future research on the potential of the accommodation sector to increase sustainability within tourism is preferably to use both qualitative and quantitative methods. Moreover, future research could include a follow-up survey to assess the concrete sustainable

practices guests have implemented in their household after returning back home. Although the use of convenience sampling in this study may potentially imply that the sample is not representative at the population level, the results do offer a solid background for future research in the field of sustainable tourism analysis. Thus, in future research, the current results can be taken into consideration and interpreted with the additionally gained information through qualitative interviews.

6.6 Concluding remarks

Being such an important component of tourism, the accommodation sector is likely to have a significant role and contribution towards achieving sustainable tourism. Accommodation establishments can act as a bridge to spread and maintain the principles of sustainable tourism, ensuring balance between the needs and interests of tourists, host communities and the environment. Furthermore, as a core tourism sector in the ecosystem services, the accommodation sector interferes with all types of tourism-related forms and concepts. By adopting practical sustainable actions in its daily activities, the accommodation sector has the potential to help the tourism industry increase resilience to socio-economic-environmental changes caused by climate change or other external or internal factors.

The results of this research can be taken into consideration in future governmental policies, by setting minimum mandatory standards for all tourist accommodation suppliers. Such minimum standards should take into consideration aspects related to all seven sustainability indicators presented in this study.

It is therefore concluded that in order to strengthen the role of the accommodation sector in sustainable tourism, future governmental policies could recommend and/or enforce mandatory guidelines on accommodation establishments:

- All newly purchased equipment should be chosen according to their durability, water and energy conservation options.
- Set a mandatory ratio of local, organic, fair trade and non-GMO produce that each accommodation establishment that offers food and beverages should integrate.
- Enforce avoidance of polluting chemicals by encouraging consumption of eco-labelled and environmentally friendly chemicals and consumables for daily use.
- Enable recycling facilities strategically around the country and require that accommodation providers recycle. Encourage share, donation and composting of leftover food from accommodation establishments.
- Enable accommodation providers to collect a carbon tax from guests that can be donated to land restoration or other environmental initiatives meant to offset CO_2emissions.
- Provide accommodation establishments with tools to measure and offset their CO_2 emissions.
- Enable accommodation establishments to offer for sale local crafts to support the economic development of the host community.
- Encourage the management of the accommodation establishment with the publication of a Sustainability Policy to ensure their commitment and responsibility towards the impacts caused, with respect to the economic well-being, social and cultural interest of the host communities.

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Appendix A: Survey 1 – Sustainability in private households (before arriving at the hostels)

UNIVERSITY OF ICELAND

Sustainability in private households
Introduction

Dear friends,

A study is being conducted at the University of Iceland to assess the potential of the accommodation sector to increase sustainability within tourism.

You are receiving this survey because of your coming stay at one of the Reykjavík HI Hostels (Reykjavík Downtown Hostel, Reykjavík City Hostel or Loft Hostel) and your contribution is highly appreciated!

The survey is in two parts, before and after your stay at the hostels and in order for the results to be complete, we kindly ask you to take part in both surveys.

Moreover, by completing both surveys you get automatically registered for a chance to win 1 Travel Package in Reykjavík, including 1 weekend stay for two persons at Loft Hostel, in a private room with bathroom, linen and breakfast + Golden Circle day trip to explore some of Iceland's most stunning sights.

Your opinion is very important and all your answers are strictly confidential, used for statistical purposes only.

It takes app. 5-7 min to answer the survey, thank you very much for your valuable time!

This survey is conducted by Emilia Prodea, as part of her MSc Degree at the Faculty of Life and Environmental Sciences, University of Iceland. If you have any kind of further questions, please do not hesitate to contact her at emp3@hi.is.

Sustainability

2. Which choice best describes your definition of "sustainability"?

- Environmental stewardship
- Economic prosperity
- Social responsibility
- All the above
- Sustainability is not currently a priority in my life

3. Please carefully read the following statements and select those that apply to you. (You may choose more than one answer)

- I am interested in information related to sustainability/sustainable development/environment related topics
- I have participated in social movements/actions to support environmental causes
- I have signed petitions with sustainability related characteristics (e.g. save endangered species, protect the Amazon forest, eliminate child labour etc.)
- I have donated money to support non-governmental organizations that fight for a clean environment
- I am familiar with the meaning of eco-certified products or services
- I am familiar with the meaning and principles of sustainable tourism
- None of these

Waste Management

4. How would you describe your recycling activities at home?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not Applicable
I recycle at home	○	○	○	○	○	○
I donate old clothes or books to charity	○	○	○	○	○	○
I buy in bulk/big packages to avoid waste	○	○	○	○	○	○
I bring my own bags when I shop	○	○	○	○	○	○

5. If you recycle at home, please select all that apply

Paper	Carton	Drinking cans	Bottles	Plastic	Glass	Metal	Organic	Hazardous	I do not recycle at home
○	○	○	○	○	○	○	○	○	○

Other (please specify)

Energy Conservation

6. Please select the frequency of next practices related to energy conservation you have at home

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I use energy saving practices at home (e.g. switching off lights, using stand-by mode for TV/ computer/ laptop, filling in the washing machine and/or dishwasher before turning on, covering pots while cooking etc.)	○	○	○	○	○	○
I purchase energy saving equipment when possible (e.g. light bulbs, fridge, washing machine, low emission vehicle, green energy etc.)	○	○	○	○	○	○

Water Conservation

7. Please select the frequency of next practices related to water conservation you have at home

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I conserve water at home (consciously taking shorter showers, closing tap while brushing teeth etc.)	○	○	○	○	○	○
I purchase water saving appliances (toilets with two flushes, saving water taps or shower heads)	○	○	○	○	○	○

Transportation

8. Please select the frequency of next practices related to transportation you have at home

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I try to reduce the CO_2 emissions resulted from my activities at home	○	○	○	○	○	○
I use the bike to go to work	○	○	○	○	○	○
I use the public transport	○	○	○	○	○	○
I walk to work	○	○	○	○	○	○
I use the car wherever I go	○	○	○	○	○	○

Purchasing of Chemicals and Consumables

9. How would you describe the purchasing behaviour regarding eco-certified consumables and chemicals you have at home?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I purchase eco-certified consumables at home (e.g. toilet paper, hand or kitchen towels, hand soap, dish soap, shampoo, shower gel etc.)	○	○	○	○	○	○
I purchase eco-certified cleaning chemicals at home (e.g. disinfectant, bathroom/floor/stove, cleaners etc.)	○	○	○	○	○	○
I use home-made/ alternative chemicals for cleaning (e.g. vinegar, sodium bicarbonate etc.)	○	○	○	○	○	○

10. If you do purchase eco-certified consumables or cleaning chemicals, please select all that apply

Toilet paper	Hand towels	Kitchen towels	Hand soap	Dish soap	Washing powder	Shampoo	Cosmetics	Cleaning products	I do not purchase
○	○	○	○	○	○	○	○	○	○

Other (please specify)

11. How would you describe the purchasing behaviour regarding fruits and vegetables you have at home?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I purchase local and in-season food, fruits and vegetables	○	○	○	○	○	○
I purchase organic products	○	○	○	○	○	○
I purchase fair trade products	○	○	○	○	○	○
I purchase non-GMO products	○	○	○	○	○	○

Few demographic questions

12. How old are you?

<25	25-34	35-44	45-54	<55
○	○	○	○	○

13. What is your gender?

Female	Male	Other
○	○	○

14. What is the highest level of school that you have completed?

Primary school	Secondary school	High school	Undergraduate -Bachelor's degree	Graduate – Master's degree	Post graduate – PhD and more
○	○	○	○	○	○

15. From the following, which is your country of residence?

16. When I choose an accommodation place I look at: (please select all that apply)

- Location
- Social Aspects/Happenings – Concerts, games and other events
- Advertising/Social media
- Reviews from other guests online

- Someone I know recommended it
- Sustainable practices
- Price
- Other (please specify)

17. Would you like to add any other sustainable practices of yours that were not covered in this survey?

Thank you for taking part in this study, you will receive the second survey in about 2 weeks time.

Kindly remember, by taking part in both surveys you get the chance to win 1 Travel Package in Reykjavík, including 1 weekend stay for two persons at Loft Hostel, in a private room with bathroom, linen and breakfast + Golden Circle Day trip to explore some of Iceland's most stunning sights.

The winner will be announced on October 30th 2015 and the prize can be used anytime between December to April of years 2015-2017 by the winner or it can be offered as a gift to members of your family or friends.

Appendix B: Survey 2 – Sustainability in the accommodation sector (after staying at the hostels)

UNIVERSITY OF ICELAND

Sustainability in the accommodation sector
Introduction

Dear friends,

Thank you for taking part in the Sustainability Study in Iceland and completing the first part of the survey! We hope you have enjoyed your time in our country.

This is the second and final part of the study and it takes app. 6-8 minutes to complete it.

Kindly remember, after completing this 2nd survey you will be automatically registered for a chance to win 1 Travel Package in Reykjavík, including 1 weekend stay for two persons at Loft Hostel, in a private room with bathroom, linen and breakfast + Golden Circle Day trip to explore some of Iceland's most stunning sights.

As mentioned in the initial email, this study is being conducted at the University of Iceland to assess the potential of the accommodation sector to increase sustainability within tourism.

You are receiving this survey because of your recent stay at one of the Reykjavík HI Hostels (Reykjavík City Hostel, Reykjavík Downtown Hostel or Loft Hostel).

Your opinion is very important and all your answers are strictly confidential, used for statistical purposes only.

This survey is conducted by Emilia Prodea, as part of her MSc Degree at the Faculty of Life and Environmental Sciences, University of Iceland. If you have any kind of further questions, please do not hesitate to contact her at emp3@hi.is

Takk fyrir / Thank you!

***1. In which HI Reykjavík Hostel have you stayed?**

- Reykjavík City Hostel
- Reykjavík Downtown Hostel
- Loft Hostel

2. How many nights did you spend at the hostel? (please write the number below)

Sustainable practices at the hostel you have stayed

3. Please carefully read the following statements and select those that apply to you. (You may choose more than one answer)

- I have read/seen the Sustainability Policy of the hostel
- I have donated at the hostel for Landvernd - the Icelandic Environment Association to protect the Icelandic nature
- I took part in the eco-events offered by the hostel (green documentaries, Swap events, workshops from recycled candles etc)
- I know what the Swan Eco-label certification stands for
- None of these

4. How much have you used next sustainable practices at the hostel?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I used the recycling facilities at the hostel	○	○	○	○	○	○
I used the free food baskets in the Guest kitchen	○	○	○	○	○	○
I used the Swap Books at the hostel	○	○	○	○	○	○
I used the Traveller’s Basket/Red Cross at the hostel	○	○	○	○	○	○
I took part in a Swap’til you drop (clothes & books) event at the hostel	○	○	○	○	○	○

5. How satisfied or dissatisfied are you with the following:

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	I don't know
Free toiletries left by other guests (soap, shampoo, shower gel etc.)	○	○	○	○	○	○
Free food baskets in the guest kitchen	○	○	○	○	○	○
Clothes Swap/ Travellers' basket	○	○	○	○	○	○

6. Please carefully read the following statements and select those that apply to you. (You may choose more than one answer)

- ☐ I do not think about recycling while travelling
- ☐ I believe recycling facilities should be available everywhere
- ☐ I am likely to recycle if facilities are available

Energy Conservation

7. How much have you used next energy saving practices at the hostel?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
Switching off lights	○	○	○	○	○	○
Filling in the washing machine before turning on	○	○	○	○	○	○
Filling in the dish washing machine before turning on	○	○	○	○	○	○
Covering pots while cooking	○	○	○	○	○	○

8. How satisfied or dissatisfied are you with the following at the hostel:

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	I don't know
Energy conservation reminders/information	○	○	○	○	○	○
Energy saving lights	○	○	○	○	○	○
Sensors	○	○	○	○	○	○

9. Please select all that apply

- ☐ I do not think about energy conservation while travelling
- ☐ I believe Iceland does not need energy conservation measures
- ☐ I believe energy conservation habits should be adopted by all
- ☐ I am likely to conserve energy if there is information encouraging me to do so

Water Conservation

10. How much have you used next water conservation practices at the hostel?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
Consciously flushing the toilet using the double flush	○	○	○	○	○	○
Consciously took shorter showers	○	○	○	○	○	○
Consciously close the water tap while brushing the teeth	○	○	○	○	○	○
Consciously tried to not waste water in my actions	○	○	○	○	○	○

11. How satisfied or dissatisfied are you with the following at the hostel:

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	I don't know
Water conservation reminders/ information	○	○	○	○	○	○
Toilets with double flush	○	○	○	○	○	○
Water flow of shower heads	○	○	○	○	○	○
Water flow of water taps	○	○	○	○	○	○

12. Please carefully read the following statements and select all that apply to you

- ☐ I conserve water to protect the environment
- ☐ I conserve water because it is expensive
- ☐ I do not think about water conservation while travelling
- ☐ I believe Iceland does not need water conservation measures
- ☐ I keep my showers short and effective

☐ I enjoy taking long showers no matter where I am

☐ I am likely to conserve water if there is information encouraging me to do so

Transportation

13. How much have you used next practices to reduce the CO_2 emissions resulted from transportation during your travel to/in Iceland?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I shared a car with others	○	○	○	○	○	○
I used the bike to go around the city	○	○	○	○	○	○
I walked to and from the hostel	○	○	○	○	○	○
I used the public transport in Reykjavík	○	○	○	○	○	○
I rented a car and used it when needed	○	○	○	○	○	○
I planted trees or other vegetation	○	○	○	○	○	○

Other (please specify)

14. How satisfied or dissatisfied are you with the following at the hostel:

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	I don't know
Car sharing board	○	○	○	○	○	○
Bike rental service	○	○	○	○	○	○
Information about public transport	○	○	○	○	○	○
Eco-driving tips	○	○	○	○	○	○

15. Please carefully read the following statements and select all that apply to you

☐ When I travel I chose what I find to be the most convenient price-quality transportation mean without considering its environmental or social aspects

☐ When I travel I chose what I find to be the most sustainable transportation mean (considering its economic, social and environmental aspects)

Other (please specify)

Consumables and Chemicals

16. How much have you used the eco-consumables at the hostel?

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I used the eco-consumables at the hostel (toilet paper, hand towels, hand soap etc.)	○	○	○	○	○	○

17. How satisfied or dissatisfied are you with the following at the hostel:

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	I don't know
Eco-certified toilet paper	○	○	○	○	○	○
Eco-certified hand towels	○	○	○	○	○	○
Eco-certified hand soap	○	○	○	○	○	○
Eco-certified dish soap	○	○	○	○	○	○
Eco-certified washing powder	○	○	○	○	○	○

Food & Beverages

18. How often have you selected the following practices while at the hostel and in Reykjavík

	Never	Rarely	Sometimes	Usually	Always	Don't know or Not applicable
I purchased local and in-season food, fruits and vegetables	○	○	○	○	○	○
I purchased organic products	○	○	○	○	○	○
I purchased fair trade products	○	○	○	○	○	○
I purchased non-GMO products	○	○	○	○	○	○

19. How satisfied or dissatisfied are you with the availability of local/organic/fair trade selection of food and beverage at the hostel

Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	I don't know
○	○	○	○	○	○

20. Please carefully read the following statements and select all that apply to you

- ☐ I usually like to consume local and traditional food when I travel
- ☐ I usually purchase the products I like without checking their country of provenience

Few more questions

21. Please read carefully the following statements and select according to your view

	Extremely willing	Very willing	Moderately willing	Slightly willing	Not willing at all
How willing are you to change your lifestyle to reduce/minimize the environmental impacts associated with your everyday actions?	○	○	○	○	○
How willing are you to pay a higher price for local products to support the local economy?	○	○	○	○	○
How willing are you to pay a higher price for eco-certified products or services?	○	○	○	○	○
How willing are you to initiate new eco-procedures at your private household after experiencing the sustainable practices at the hostel?	○	○	○	○	○

22. Please choose accordingly

	Very Important	Important	Neutral	Not very important	Not important at all	I do not know
How important is sustainability in your accommodation selection process?	○	○	○	○	○	○
How important was the Swan Eco-label certification of the hostel in your accommodation selection process?	○	○	○	○	○	○

23. Would you like to add something else?

Congratulations!

You are now registered for a chance to win 1 Travel Package in Reykjavík, including 1 weekend stay for two persons at Loft Hostel, in a private room with bathroom, linen and breakfast + Golden Circle Day trip to explore some of Iceland's most stunning sights.
The winner will be announced on October 30th 2015 and the prize can be used anytime between December to April of years 2015-2017 by the winner or it can be offered as a gift to members of your family or friends.
Thank you for your valuable time!

Appendix C: Correlation between Survey 1 and Survey 2

Sustainability indicators	Survey 1 – Sustainability in private households	Survey 2 –Sustainability in the accommodation sector
Information and Education	**Q3.** • I am interested in information related to sustainability/sustainable development/environment related topics • I have participated in social movements/actions to support environmental causes • I have signed petitions with sustainability related characteristics (e.g. save endangered species, protect the Amazon forest, etc.); • I have donated money to support non-governmental organizations that fight for a clean environment; • I am familiar with the meaning of eco-certified products or services • I am familiar with the meaning and principles of sustainable tourism	**Q3.** • I have read/seen the Sustainability Policy of the hostel • I have donated at the hostel for Landvernd - the Icelandic Environment Association to protect the Icelandic nature • I know what the Swan Eco-label certification stands for
Waste management	**Q4**. I recycle at home	**Q4.** I used the recycling facilities at the hostel
Energy Conservation	**Q6.** I use energy saving practices at home (e.g. switching off lights, using stand-by mode for TV/computer/laptop, filling in the washing machine and/or dishwasher before turning on, covering pots while cooking etc)	**Q7.** Switching off lights
Water Conservation	**Q7.** I conserve water at home (consciously taking shorter showers, closing tap while brushing teeth etc.)	**Q10.** Consciously tried to not waste water in my actions

Transportation	**Q8.** • I try to reduce the CO2 emissions resulted from my activities at home • I use the bike to go to work • I use the public transport • I walk to work • I use the car wherever I go	**Q13.** • I have shared a car with others • I used the bike to go around the city • I walked to and from the hostel • I used the public transport in Reykjavík • I rented a car and used it when needed
Purchasing of chemicals and consumables	Correlation excluded in this category since these items are less likely to be purchased while travelling	
Food and beverages	**Q11.** • I purchase local and in-season food while at home • I purchase organic products • I purchase fair trade products • I purchase non-GMO products	**Q18.** • I purchased local and in-season food, fruits and vegetables • I purchased organic produce • I purchased fair trade products • I purchased non-GMO products