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Is there Demand for Sustainable Tourism?

Study for the World Tourism Forum Lucerne 2011

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Abstract

This empirical study consists of two parts. The first goal of this study is to learn more about tourists' understanding of sustainable tourism. The empirical survey with 6,000 respondents in eight countries identifies the most relevant aspects of sustainable tourism from a tourists' perspective. Overall the perception is balanced over the different dimensions. Furthermore, five different types regarding tourists' understanding of sustainable tourism are identified in a cluster analysis and a potential market size of sustainable tourism of 22% of all tourists can be identified. A choice experiment with almost 5,000 Swiss respondents is conducted in the second part. It shows that tourists principally favour sustainable tourism products. Although there are clear preferences in favour of sustainable products, it can be shown that the respondents are only willing to pay a small premium for the inclusion of specific attributes in most cases.

Keywords

Sustainable tourism, understanding of sustainable tourism, clustering, demand, empirical survey, choice model, choice experiment, conjoint

Citation

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Management Summary

The first goal of this study is to learn more about tourists' understanding of sustainability, because everybody talks about sustainability – including in the tourism sector. But what exactly is sustainable development from a tourist's perspective, how do tourists interpret the term sustainability and how do tourists assess the importance of sustainable development in tourism? To clarify these questions, an empirical survey confronts travellers from eight countries with different statements which describe variable attributes of sustainable tourism.

In general, tourists are well informed about the important aspects of sustainable tourism. The main descriptive findings of the first empirical phase on tourists' understanding of sustainable tourism are:

- The overall perception is balanced over the different dimensions. There is no clear prioritisation of a dimension. The share of people agreeing to the statements about sustainable tourism is only below 50% for some economic attributes and for the attributes "prolonged stay" and "CO_2-compensation".
- The attribute "upkeep of a scenic view and the cultural heritage" is assessed as most sustainable. Generally, attributes referring to *local* products, *local* community and *local* culture are judged as most sustainable.
- Tourists rate what they can see, and/or experiences directly at the destination as more relevant for sustainable tourism in the ecological dimension.
- For 22 % of the respondents, sustainability is among the top three influencing factors while booking vacations. This group of tourists, the so-called sustainability aware tourists, presents an interesting target group.

Five different types regarding tourists' understanding of sustainable tourism are identified:

- The *balanced type* seriously observes all three dimensions and has above average shares of agreement in all dimensions. 33% of the respondents belong to the balanced type.
- The *sceptic* has a critical attitude and rates all attributes clearly lower. 25% of the respondents belong to the sceptic type.
- The *socio-economic type* considers the social and economic dimension in particular. 12% of the respondents belong to the socio-economic type.
- The *localised type* rates especially the attributes related to local aspects of sustainability and to culture as relevant for sustainable tourism. 15% of the respondents belong to the localised type.
- The *ecological type* considers in particular ecological aspects to be relevant for sustainable tourism. 15% of the respondents belong to the ecological type.

The second goal is to empirically investigate if there is a potentially interesting market for sustainable tourism products. The preferences of tourists and also the willingness to pay a premium for sustainable products are identified by employing a choice experiment. The choice experiment was conducted with almost 5000 respondents in Switzerland. Generally, the choice experiment shows that tourists would principally like to buy sustainable tourism products. The respondents consistently favoured the more sustainable levels of the proposed attributes. Although there are clear preferences in favour of sustainable products, it can be shown that the respondents are not willing to pay a substantial premium for the inclusion of specific attributes. However, there is some evidence that potential customers of sustainable tourism products demand completely sustainable products and they are less price sensitive for such a product.

Although customers are not willing to pay a significant premium, this study concludes that offering sustainable tourism products could be a successful differentiation strategy in order to gain additional market shares. There is an interesting market segment with a target group of 22% sustainability aware tourists who consider sustainability as important when booking a holiday.

Finally, the understanding of sustainable tourism mostly does not influence the behaviour of tourists. Nevertheless, the identified types of tourists are important for providers of touristic offers because it helps to understand how to approach the potential customers of sustainable products.

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1. Introduction

Sustainability is becoming a more and more important issue in the tourism sector. Nowadays, it is well known that sustainability is an important subject for the tourism sector: On the one hand, natural and social resources such as landscape, flora and fauna, local culture, traditions, etc. are essential input factors for tourism. On the other hand, tourism often (over-)stresses these resources. In the worst case, this overstraining can lead to the self-destruction of tourism. Therefore tourism cannot only use these resources, but has to manage them carefully.

Nowadays, more and more sustainable tourism products are developed. However, often they are still niche products which are offered in the luxury segment. In order to have a greater impact, sustainable tourism products should also be offered in the mass market. Despite existing products, it is not really clear who belongs to the target group, how large the target group is and what the typical characteristics of customers of sustainable tourism products are. Furthermore, it is not well known what the potential customers' understanding of sustainable tourism is, i.e. what characteristics are important for them and should be considered when designing a new sustainable product in order to meet the needs of potential customers. Budaneau (2007) states that the knowledge about tourists' preferences is incomplete and hinders sustainable progress in the sector. Finally, the question remains whether tourists actually demand these products and if they are even willing to pay more for sustainable products compared to standard products. This study tries to give some answers to these fundamental questions.

There are several reasons why sustainable tourism is believed to become important in the future. A recent study of the SNV Netherland Development Organisations (SNV 2009) lists "generational shifts", "urbanisation", "need to connect with nature", "going green", "demand for authenticity", "search for fulfilment" and "emergence of experiential tourism" as lifestyle trends that favour responsible travel. There are a lot of studies which try to measure the potential of sustainable tourism or for eco-tourism. Adlwarth (2010) presents a survey on the holiday travel of German tourists in the tourism year 2007/08 and categorises the households as Corporate Social Responsibility (CSR)-interested and non CSR-interested households. 33% of the travel active households are CSR-interested, which means that "they scored disproportionately high in values such as environment and climate protection, development aid, compliance with ethic standards especially human rights and social commitment for social disadvantaged." He finds that 50% of the CSR interested travellers would spend up to 5% more money and the remaining 50% as much as 10-15% more.

Most of the other studies only look at the demand for eco-tourism or ecological aspects of sustainable tourism. TripAdvisor (2010) find in their ecotourism survey that 38% of travellers worldwide said that "environmental-friendly tourism is a consideration." According to the TripAdvisor survey, 34% are willing to pay more for an environmentally friendly hotel, 25% are willing to pay a premium of 5 - 10 % and 12% a premium of 10 - 20%. However, a study of travelhorizons (2009) states that only 9 % of U.S. consumers are willing to pay more for green travel options and only 3% have purchased a carbon offset, although 78% of travellers consider themselves as "environmentally conscious". According to a Lonely Planet study (2007), 70% of the respondents state that they have already travelled in an environmental friendly way, which means in the context of this study for example that they used a bus instead of an airplane for the journey to the destination. Over 90% declare that they will consider sustainability when they travel in the future. Deloitte (2008) investigated the behaviour of business tourists: 38% have informed themselves about the eco-friendliness of the hotel, and 28% are willing to pay 10% more for an eco-friendly hotel. Rheem (2009) carried out an online survey to target the

U.S. online traveller population. She focuses on environmental aspects (reduction of consumption, reduction of harmful output / recycling, product procurement and emissions offset). The main findings are that 44% of U.S. travellers consider environmental aspects important when they plan their travel and a third of travellers are willing to pay a premium for green travel.

However, these studies, which mostly define price premiums for sustainable products, ask only about how much people are willing to buy in a simple question. These kinds of studies tend to clearly overstate price premiums because only intention is measured without looking at the actual behaviour or without making comparisons with other goods or prices.[1] In order to check for the behaviour, Adlwarth (2010) looks at the travel patterns for holidays of CSR-interested travellers and compares them with the pattern of non-CSR interested. For example, CSR-interested travellers choose significantly more frequently train travel and bus.

1.1. Goals and design of the study

The general research question is:

Is there demand for sustainable tourism?

The study consists of two parts. The first part investigates what tourists really understand by the term or concept of sustainable tourism. The second part looks in detail at whether tourists actually book sustainable products and are willing to pay more for such products. The corresponding goals and the design of these two parts are presented in section 1.1.1 and section 1.1.2.

1.1.1. Understanding of sustainable tourism

The first goal of the study is to learn more about tourists' understanding of sustainable tourism, because everybody talks about sustainability – including in the tourism sector. But what exactly is sustainable development from a tourist's perspective, how do tourists interpret the term sustainability and how do tourists assess the importance of sustainable development in tourism? These questions are hardly ever addressed in the scientific literature on sustainable tourism and therefore this study adds important new insights to the literature. To clarify these unanswered questions, an empirical survey confronts tourists from eight countries with different statements which describe variable attributes of sustainable tourism.

It is important to note that the goal of this study is not to discuss the correct definition of sustainable tourism from a theoretical point of view. We are mainly interested in how travellers perceive and define sustainability. The empirical evidence should help in gaining a better understanding of the relevant aspects that should be considered when designing a new sustainable product. It is important to recognise the relevant aspects because first of all the fulfilment of the needs of sustainable tourists is essential for the success of a sustainable product on the market.

In a second step, and based on the results of the above mentioned empirical survey, different types of tourists relative to their understanding of sustainable tourism are identified. This typology puts tourists with a similar understanding of sustainable tourism together into one cluster. With the help of this typology and the shares of each type, interesting insights for tour op-

[1] Rheem (2009) asks "how much of a premium would you be willing to pay for any environmentally friendly travel choices when travelling for leisure?" She presents different options to the respondents, as for example "travel (in general)", "air travel option", "train travel option", etc. and lists the willingness to pay for each option. This method is called contingent valuation.

erators, hotels and other companies who want to develop sustainable products can be derived, because knowledge about the importance of different types of customers and their understanding of sustainability is gained. This helps to address the needs of the customer in an efficient and more goal-oriented way, and to identify the most interesting group of potential customers for a specific new product. The methodology of this first empirical part of the study is explained in more detail in section 3.1.

1.1.2. Choice experiment: Do tourists book sustainable tourism?

The second goal is to investigate empirically if there is a potentially interesting market for sustainable tourism products. The preferences of tourists and also the willingness to pay a premium for sustainable products are identified by employing a choice model. This methodology allows the design of products which include specific characteristics of sustainable tourism and the ability to determine the preferences of customers relative to the different included characteristics of sustainable tourism. To our knowledge, there does not exist a study in the scientific literature which uses choice models to address questions related to preferences towards sustainable tourism products which consider all dimensions of sustainability. Only the influence of ecological aspects or aspects not related to sustainability has been determined in most of the existing studies which use choice models. Furthermore, most of the existing studies which look at the demand for sustainable tourism products in general use contingent valuation and related methods. Therefore, the second part of the study adds to the existing literature a more detailed derivation of the preferences and willingness to pay for sustainable tourism. Additionally, choice models overstate the willingness to pay less than the often used method of contingent valuation. The choice experiment was conducted with almost 5000 respondents in Switzerland. Its methodology is explained in more detail in section 4.1.

1.1.3. Structure of the article

The article is structured as follows: The attributes describing sustainable tourism which are selected for the first part of the empirical survey are presented in section 2. Section 3 presents the empirical survey and its results regarding tourists' understanding of sustainable tourism. Furthermore a ranking of factors influencing the booking decision is presented. This allows an initial insight to be gained into the market potential of sustainable tourism. Section 3finishes with the presentation of the typology of tourists. This is followed by the presentation of the most important finding of the second empirical part, i.e. the choice experiment in Switzerland in section 4. At the beginning of section 3 and section 4 the relevant literature for the respective empirical phase is presented. Finally the conclusions are presented in section 5.

2. Attributes describing sustainable tourism

There are a lot of different definitions and interpretations of sustainable tourism in the literature. The definition of sustainable tourism from the Word Tourism Organization UNWTO states that sustainable tourism is tourism that "meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to the management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems" (UNWTO, 1995, cited in Miller, 2003).[2] This definition is used for this study firstly because it is near to the famous sustainability definition of the Brundtland report (World Commission on Environment and Development, 1987), secondly, focuses on the key element of sustainability, i.e. the "the needs of the present without compromising the ability of future generations to meet their own needs", and thirdly addresses the three dimensions economy, ecology and society in which the attributes of this study are also grouped.

The attributes describing sustainable tourism used for the first part of the empirical investigation have been derived in an interdisciplinary way including most departments of the Lucerne University of Applied Sciences and Arts.[3] The participating departments derived the relevant attributes from their specific perspectives, e.g. the department of social work proposed socio-cultural and social attributes, etc. These proposals are based on an extensive literature research and on existing indicator systems for sustainable tourism. The major guideline to identify these attributes was the definition of sustainable tourism from the Word Tourism Organization UNWTO as presented above. The respective results were discussed in a workshop with all involved researchers. The approved result of this workshop is a list of 23 attributes to be included in the survey. These attributes are considered as most important and relevant for tourism and represent all dimensions of sustainability. In this chapter, they are briefly presented. First, the ecological attributes will be introduced before presenting the social and economic attributes. The articles from the various departments explaining the derivation of the attributes in detail can be found in the appendix.[4]

2.1. Ecological attributes

In general, the ecological attributes are the most discussed and therefore the most obvious ones to start with, since the environment, e.g. landscape, sea water quality, etc., is often perceived as having an important touristic value. However, we do not state that the ecological attributes are the most important attributes. All dimensions of sustainability should be considered as equally important.

Although climate change and the related emission of greenhouse gases is one of the most relevant ecological issues related to sustainable tourism, CO_2-emissions are not addressed separately, because CO_2-emissions are highly correlated with other aspects considered, e.g. traffic or energy use. Traffic caused by tourism is one of the most important issues in the ecological dimension. It has a significant impact on the environment: 60 to 95% of the environmental impact of leisure-tourism is due to transport (Goessling et al., 2005) and up to 90% of energy consumption in tourism is used for the outward and return journey (Müller 1995, cited after

[2] We do not use the conceptual definition from the UNWTO (2004), because unfortunately this elaborate and long definition loses the clear focus from the definition presented above.
[3] The departments involved are the department of business, social work, engineering and architecture, and art and design.
[4] The reports of the departments are the responsibility of those particular authors and express their own views about sustainable tourism from their specific perspective.

Baumgartner, 2008). Furthermore, traffic causes a number of problems: e.g. greenhouse gas and air pollutants emissions, intensified consumption of land, energy use, noise pollution or deterioration in the quality of landscapes (WTO, 2004). And traffic is the main factor in tourism which causes CO_2-emissions, accounting for 75% of tourism related CO_2-emissions (WTO, 2004). To mitigate these impacts one could consider either travelling by public transport, or to compensate the CO_2-emissions caused by the journey elsewhere or to stay longer at destinations that are far away. Therefore, the following three attributes concerning traffic are proposed:

1. *Sustainable tourism is characterised by a good provision of public transport to and from, and at the destination.*
2. *Sustainable tourism compensates the CO_2-emissions caused by the outward and the return journey through the support of climate protection projects which help to reduce CO_2-emissions.*
3. *Sustainable tourism encourages people travelling from far away to stay longer at the given destination.*

The energy source and the efficient use of energy as well as other natural resources are relevant for tourism. On the one hand, it is increasingly necessary to use renewable energy sources, if the scarcity of traditional energy sources such as oil, gas and coal is taken into account. On the other hand, energy and other resources such as water, building materials, etc. should be used in an efficient way to ensure an optimal inter-temporal allocation. Unfortunately, there are enough examples in the tourism sector where resources are used inefficiently[5]. A good example is the overexploitation of water in Tanzania (Goessling, 2001)[6] which has led to a lowering of the groundwater table, to land subsidence, deteriorating groundwater quality and saltwater intrusion, negatively affecting the living conditions in coastal areas for the local population and for tourists. This example shows that overuse, and/or misuse of an environmental asset, has often not only ecological consequences, but also negative impacts on the tourism sector.

Ecological aspects are also often reflected from an architectural perspective. The compactness of buildings is one of the most important criteria of architectural sustainability because it facilitates energy-efficient operating concepts that react to claims for comfort and the utilised capacity. In order to manage a building in a resource-saving way, building management requires, on the one hand, an efficient management of heating and cooling energy, drinking and wastewater and, on the other hand, measures on the level of structure and building equipment such as intelligent equipment which allows the operating system to react to changing conditions. Furthermore, all resources that are necessary for the construction and deconstruction of buildings and infrastructure should be allocated optimally, i.e. the embodied energy[7] should be minimised. This includes the careful selection of building materials, their regional provenance and the avoidance of harmful substances. Adequacy and comfort should also be considered: Sustainable buildings provide a comfortable climate, cosiness and functionality, which is adequate to the particular context and place, e.g. a hotel in the tropics should not cool down its rooms to 18 degree Celsius. Based on these arguments, the following four attributes are formulated.

4. *Sustainable tourism is characterised by the use of renewable energy sources.*

[5] The inefficiency concept includes the overuse of resources.
[6] For more examples see the article on the economic and ecological attributes in the appendix.
[7] Embodied energy is the sum of the non renewable prime energy, which is needed for the fabrication and disposal of a material, for which the requirements for the fabrication and disposal are calculated separately.

5. *Sustainable tourism has an operational concept for its infrastructure and buildings which ensures that resources, especially water and energy, are used in an efficient way, avoiding the unnecessary waste of resources.*
6. *Sustainable tourism optimises resource use (energy, water, building materials, etc.) necessary for the construction and deconstruction of infrastructure.*
7. *Sustainable tourism offers products with a level of comfort (food, heating, etc.) which are adapted to the local conditions (climate, sea level, etc.).*

Although the use of resources should be minimised, there will always be some amount of waste which cannot be avoided. Therefore, appropriate waste management (including wastewater) is important. This leads to an eighth ecological sustainability attribute.

8. *Sustainable tourism minimises waste output and ensures appropriate waste management and sanitation.*

Finally, biodiversity is an important aspect for all forms of nature based tourism because only a functioning ecosystem can guarantee a constant tourist flow, and biodiversity is a critical component of the natural environment. Moreover, the motivation of tourists visiting nature parks is to observe a large variety of animals. Therefore, it is essential to maintain this diversity.

9. *Sustainable tourism takes the preservation of biodiversity into account.*

2.2. Social attributes

There has been an increased awareness of aspects of social responsibility since the turn of the millennium and a growing discussion about social impacts of tourism has taken place. There are basically three groups of subjects which are important for the creation of social attributes of sustainability: human rights, community involvement and development, and respect for the needs and traditions of the local people.

The first group, aspects of "human rights", focuses on the rights of an individual such as an employee or members of different minority groups. Concerning sustainable tourism, working conditions are an important aspect within this group.

10. *Sustainable tourism does not discriminate against either employees or guests due to nationality, age, gender, religion, disability and/or political beliefs.*
11. *Sustainable tourism has fair working conditions regarding working hours, health, safety and possibilities for continuing education.*

A special aspect of equality is the distribution of income. Tourism often leads to a higher regional income. Normally, higher income is assessed positively. However, an increase in regional income alone does not say much about sustainability, since it does not reflect its distribution. In fact, sustainable economic development should coincide with the improvement in the living conditions of poor people.

12. *Sustainable tourism enhances a more equal income distribution within the local community.*

With regard to social attributes, it is always important to consider the regional or rather the local context. The second group of arguments "community involvement and development"

adds attributes such as employment of local residents, use of local and fair trade services and goods while paying an adequate and fair price, and local and owner-led hotels which fulfil environmental and social standards. These kinds of attributes can be categorised as social as well as economic attributes. In this study, they are listed among the economic attributes (see below). However, purely social attributes are also considered in this second group:

13. Sustainable tourism involves the local community in the development of tourism.

Even if the practical implementation of social responsibility within the tourism industry takes place in the target areas or within companies, the awareness and acceptance of the consumers is needed for the realisation and final success of sustainable products on the market. Therefore, all actions, and especially actions towards sustainable tourism, should be communicated transparently and freely.

14. Sustainable tourism communicates transparently and credibly.

The last group, "respect for the need and traditions of the local people", regards the target communities in the tourism destinations. Cultural aspects are normally listed within the social dimension in the classic framework of the three dimensions of sustainability and are often neglected compared to other "traditional" social attributes such as those listed above. Some authors, e.g. Jon Hawkes (2001), believe that cultural aspects are vital for sustainability and should be discussed separately. Furthermore, culture is an essential feature of touristic offers and an important pull factor of destinations to attract tourists. For example Rittichainuwat et al. (2008) find that cultural aspects are some of the most important pull factors for tourists travelling to Thailand.

As soon as a tourist enters a region or destination, he starts to contribute to changes within the local culture, willingly or unwillingly. The impact of tourists on the local culture is multifaceted and often happens unconsciously. This impact is often described as a unilateral process which consequently leads to a displacement and destruction of the local culture. However, the cultural impact of tourists is not necessarily negative. There are often positive aspects, for example an increasing equality within the local community. Nevertheless, sustainable tourism should take account of the cultural impact of tourists, minimise negative aspects and raise the awareness of tourists regarding their impacts on the local population and their culture by providing an insight into the local culture and the local, social and economic development of the destination.

15. Sustainable tourism provides an insight into the local cultural, social & economic development and into the local community.
16. Sustainable tourism considers the impact of tourists on the local population and their culture, respecting the needs and traditions of the local population.

Finally, the cultural heritage should be taken into account, for example buildings and monuments, including the landscape, because the cultural heritage and a nice landscape are often some of the most important assets of a destination. It is important to consider the landscape as part of the cultural heritage because humans actively shape it and have contributed to typical landscapes as for example the UNESCO world heritage Lavaux vineyards in Switzerland. If this landscape is lost, the touristic value decreases sharply. In order to sustain tourism based on these attractions, it is important to maintain them.

17. *Sustainable tourism places an importance on the upkeep of the scenic view of a place, as well as its cultural heritage.*

2.3. Economic attributes

Non-decreasing economic well-being (i.e. the increase or at least the preservation of economic well-being) is a major objective, if not the dominant objective, in the economic dimension. Non-decreasing well-being means that today's level of economic wealth should increase or at least stay constant over time. Other objectives, which can be sustainability criteria on their own, are – at least from the economic point of view – of secondary importance, for example maintenance of regional employment. In this context, such indices are measures more for reaching the main objective than objectives by themselves.

Other frequently mentioned attributes such as diversity of supplied services or a versatile and flexible infrastructure are stability factors which improve the probability of a continued maintenance of regional economic well-being with a small variance, i.e. a small probability of large negative outliers in regional income. A large diversity of supplied services for example, reduces the risk of being dependent on a specific market segment on the demand side, which also reduces the dependence on specific preferences of the tourists. Second, if one specific offer has to be omitted in the short or long term, (e.g. no snow during a winter season), touristic demand, and therefore regional economic well-being, is only partially affected. The same kind of reasoning holds for a versatile and flexible infrastructure: The more versatile and flexible the infrastructure, the easier it is to adapt it to the ever changing needs of tourists. Despite the superiority of non-decreasing economic well-being, these secondary attributes are also addressed in the study because they are important indicators for controlling the achievement of the main goal.

18. *Sustainable tourism contributes to the preservation of long-term regional economic well-being.*
19. *Sustainable tourism contributes to the maintenance of regional employment and the development of new jobs within the region, which also offer adequate wages.*
20. *Sustainable tourism offers a large variety of different and independent products.*
21. *Sustainable tourism has a versatile and flexible infrastructure.*

However, it should be noted that sustainability and sustainable tourism in the economic dimension do not mean that future economic opportunities in the tourism sector must not be harmed. Since the source of economic well-being is not of major importance, sustainability only requires that future economic opportunities in general are not harmed.

The leakage of tourism revenue to other regions or countries is an important aspect in the context of sustainable tourism. Revenue leakage may compromise the economic development of a host region and/or of the local population. If the greater part of the generated income (value added) is for the benefit of non-residents, the main economic sustainability criteria, i.e. the strengthening of the economic well-being, is at risk. Leakage rates can be substantial; e.g. 55% for developing countries (Boo, 1990), 50-70% for small island countries (Budaneau, 2005) and up to 99% for the destination *Komodo National Park* in Indonesia (Walpole/Goodwin, 2000, cited in Sandbrook, 2010). Hence, besides employing locals it is important to use predominantly local products and services and to encourage and support the entrepreneurship of locals.

22. *Sustainable tourism uses local products and services while paying an adequate and fair price for these products and services.*

Tourism is an important economic base for many poor developing countries, since tourism provides jobs, opens up (new) business opportunities and leads to imports of foreign currencies (WTO, 2004). Poverty alleviation through (sustainable) tourism could in general be subsumed under the above arguments concerning economic development and improvement, since economic development should be able to reduce poverty as a consequence. However, economic development is a necessary but not a sufficient condition for poverty alleviation, because it also has to be made sure that the poor and poorest benefit from the increased regional value added with respect to income as well.

23. *Sustainable tourism contributes to poverty alleviation within the destination.*

We believe that this list of 23 sustainability attributes covers the most important aspects of sustainable tourism and is therefore well suited to the empirical investigation of tourists' understanding of sustainable tourism. This enumeration is not conclusive and other sustainability aspects could have been incorporated, in addition to or replacing the proposed attributes.. However, we did not incorporate too many attributes in the empirical survey in order to keep the survey as easily understandable and as short as possible to ensure a high enough participation rate.

3. Understanding sustainable tourism

Before turning to the empirical survey of tourists' understanding of sustainable tourism, the existing literature on the typical sustainable tourists and their understanding of sustainability is briefly discussed: A typical consumer of sustainable tourism has a higher income (Rheem, 2009), resides in urban areas (Avila-Foucat, 2008, SNV, 2009) and is well educated (SNV, 2009). Additionally, Rheem (2009) finds that green travellers are more frequent among frequent business travellers than among infrequent business and leisure-only travellers (Rheem, 2009).

There are some empirical studies investigating the understanding of sustainability in general. One good example is the "Baromètre 2010" (Swisstainability, 2010) where the sensitivity and the behaviour of French-speaking Swiss nationals with regard to sustainability are surveyed. This study looked at what they know about sustainability and how their daily behaviour, and therefore also their consumption decisions, are influenced by this specific personal knowledge. Different sustainability types could be identified, which differ related to their behaviour, their affinity toward sustainability, and socio-demographic characteristics. Manget et al. (2009) proposes another typology focusing on the ecological dimension. They ask consumers about their understanding of green products. They ask about the assessment of different characteristics (attributes) of a product, for example the recyclability of a product. They find that consumers define green differently. For example, people from different countries of origin define it differently. In another study, Gilg et al. (2005) identify four sustainability types related to their attitude towards sustainability. These four types are called "committed environmentalists, mainstream environmentalists, occasional environmentalists, non-environmentalists".

Looking more specifically at the understanding of sustainable tourism, the definition and understanding of sustainable tourism from a tourist's perspectives is seldom discussed in the literature. Guyer and Pollard (1997) look at environmental quality and find that it is perceived differently by each tourist. Furthermore, they find that it differs not only with the individual, but also with the destination and the activity undertaken. However, there are no studies defining economic and social sustainability from a tourist's perspective.

3.1. Empirical Method

To clarify the tourists' understanding of sustainable tourism, an online survey was designed by the Lucerne University of Applied Sciences and Arts and was carried out by the research institute IPK International in Munich among travellers in eight countries. A pilot test was carried out in Switzerland in order to check the understanding of the proposed attributes and to test the whole questionnaire before the definitive survey took place.

The sample in the eight countries is a self-recruited random sample. The contacted persons are representative regarding the population of a specific country. Since only tourists who travel are allowed to answer the questionnaire, the sample of people finishing the survey is representative regarding the travelling population of a respective country and not regarding the whole population. Overall, 6,113 tourists answered the questionnaire completely. These respondents resulted from a random sampling from travelling people who are over 15 years old. The research was carried out with the following sample sizes[8]:

- Brazil: n = 750
- Germany: n = 752
- Great Britain: n = 751
- India: n = 755
- Russia: n = 769
- Switzerland: n = 750
- Sweden: n = 750
- USA: n = 836

The respondents were asked to assess the statements describing sustainable tourism as described in section 2 on a scale of 1 to 5, where the value 1 means "I strongly disagree" and the value 5 means "I strongly agree". Additionally, the usual socio-demographic questions and some question about travel behaviour were added. The socio-demographics of this sample and other descriptive statistics will be presented in section 3.2.1.

The empirical phase has shown that most of the attributes are well defined and clearly explained. Nevertheless, there are some attributes that might have caused difficulties to the respondents such as the attribute which describes the adapted comfort[9] and the attribute that describes prolonged stays[10]. They were too complicated for most respondents to understand because they try to describe a complex fact in one sentence. Therefore, interpretations regarding these two attributes should be made carefully and in most cases these two attributes are excluded from the analysis. Furthermore, it would have been interesting to separate the "upkeep of the scenic view and the cultural heritage".

One of the goals of this study is to identify different types of tourists related to their understanding of sustainable tourism. For this purpose, a cluster analysis with the mean-component-method (varimax rotation) is conducted to derive a typology of different types with differing attitudes towards sustainability in tourism. In the following, some descriptive statistics are presented before turning to the cluster analysis.

3.2. Descriptive results

The basic socio-demographic statistics and the descriptive statistics related to the travelling behaviour are presented below in section 3.2.1, followed by the descriptive results of the rating of the attributes in section 3.2.2 and the factors influencing the decision to book a holiday in section 3.2.3.

[8] This sample size resulted because the contract between the Lucerne University of Applied Sciences and Arts and IPK guaranteed 750 respondents who completed the survey per country.

[9] Sustainable tourism offers products with a level of comfort (food, heating, etc.) which are adapted to the local conditions (climate, sea level, etc.).

[10] Sustainable tourism encourages people travelling from far away to stay longer at the given destination.

3.2.1. Socio-demographics

Table 1 presents the basic socio-demographic data. In the third column, the distribution over the whole sample is shown, whereas the following columns list the distribution for each country. In total 47.5% of the participants were women, the average age of a participant is 41 years, 67% of the respondents are married, most of the participants have an higher level of education and an higher level of income. The last two facts are caused by the fact that only people who travel are included in the sample, and only rich people who are normally also well-educated can afford to travel in less developed countries. Furthermore, older people are underrepresented, because the survey was conducted online.

It can be noted that with regard to the socio-demographics of the sample, there are some great differences between the countries (5% and more compared to the mean size). Although some of these country differences might be surprising, they are in line with the socio-demographics of the yearly World Travel Monitor and are again caused by the fact that this sample is only representative with regard to people travelling and not with regard to the whole population. Regarding gender there are more travelling women in the sample from Great Britain and Russia, more men from Brazil and India. The respondents from Brazil, India and Russia are younger, having an average age of 36. There are more travelling singles from Brazil and fewer from India.

In order to be able to compare the education of the respondents in the different education systems of the countries involved, the level of education is categorised into three levels of education, again according to the usual categorisation in the World Travel Monitor. A higher education means that they have at least been to a university, and a low level of education that the respondent has only visited a primary school or secondary school. There are many more respondents with a lower level of education from Germany and more from Great Britain; there are many more respondents with a middle level of education in Germany, Sweden and Switzerland and much fewer from India. Finally, there are many more with a higher level of education from Brazil, USA, India and Russia.

In order to be able to compare different incomes, four income categories according to the World Travel Monitor are constructed (lower, lower middle, upper middle, and upper income). These categories are built according to the distribution of the income in the country. For example, the boundary between lower middle and upper middle income is the average income in the respective country. That is why with regard to some countries, most of those included are from the upper income group, because they are the only ones who have got enough money to travel.

		Total	Brazil	Ger-many	USA	Swe-den	Swit-zer-land	India	UK	Rus-sia
Gender	Female	**47.5%**	42.8%	48.4%	49.0%	50.9%	46.4%	35.1%	53.5%	53.4%
	Male	**52.5%**	57.2%	51.6%	51.0%	49.1%	53.6%	64.9%	46.5%	46.6%
Age	Average	**41**	36	45	47	44	42	36	45	36
Marital Status	Single	**33.0%**	45.6%	30.5%	32.7%	33.1%	29.7%	27.9%	32.2%	32.4%
	Married	**67.0%**	54.4%	69.5%	67.3%	66.9%	70.3%	72.1%	67.8%	67.6%
Educa-tion	Low level	**6.7%**	3.5%	19.5%	3.1%	8.0%	5.2%	0.0%	12.4%	2.7%
	Middle level	**27.6%**	11.9%	40.4%	15.0%	48.5%	41.6%	4.1%	34.2%	26.4%
	Higher level	**65.7%**	84.7%	40.0%	81.9%	43.5%	53.2%	95.9%	53.4%	70.9%
Income	Lower group	**8.8%**	1.1%	15.7%	5.1%	6.8%	6.9%	16.5%	14.9%	4.2%
	Lower Middle group	**18.6%**	14.8%	18.4%	14.4%	12.7%	23.6%	19.8%	18.5%	27.1%
	Upper Middle group	**26.7%**	29.5%	26.6%	9.8%	25.1%	39.1%	24.0%	26.2%	34.9%
	Upper group	**46.0%**	54.6%	39.4%	70.7%	55.5%	30.4%	39.8%	40.3%	33.8%

Table 1: Socio-demographics

The respondents were also asked questions about their knowledge of sustainable tourism products, if they have ever booked such a product and, if they normally book their vacations online. 33.6% of the respondents know sustainable tourism products and 20.3% have already booked such a product, i.e. more than half of those who know a sustainable have already booked such a product. A high 67.7% of the respondents normally book online. This high share is explained by the fact that the survey was conducted online and therefore more internet literate people are included in the sample.

3.2.2. Rating of the attributes

In the following we will identify the most important aspects by looking at the share of people who rate an attribute with either the value 5 ("I strongly agree") or 4 ("I agree") as shown in Figure 1- Figure 3 below. The overall perception is balanced over the different dimensions. The share of people agreeing is only below 50% for some economic attributes and for the attributes "prolonged stay" and "CO2-compensation" The highest share of agreement is recorded for the attribute "scenic view / cultural heritage". This is not surprising because landscape and cultural heritage are often a very important motivation to travel to a certain place and it is in the tourists own interest that they are well maintained.

The most important findings in each dimension will be briefly discussed, starting with the ecological dimension, as shown in Figure 1 where the attributes are ordered according to the list presented in section 2.

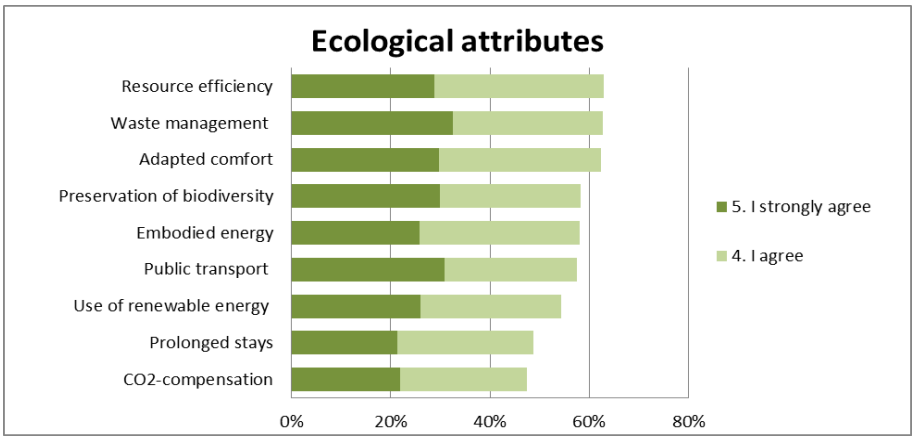

Figure 1: Ecological attributes of sustainable tourism products

From an ecological point of view, the attribute "resource efficiency", i.e. the efficient use of resources, especially water and energy, avoiding the unnecessary waste of resources, is the highest rated attribute, with 63 per cent of the respondents in agreement, together with "minimisation of waste / waste management" (63%) and "adapted comfort" (62%), i.e. products with a level of comfort (food, heating, etc.) which is adapted to the local conditions (climate, sea level, etc.).[11] These attributes can be regarded as equally important, because the Sidak-T-test shows that there is no significant difference in the observed mean values on the 95% significance level.[12] However, the mean values of these three attributes are significantly different compared to all other ecological variables, which qualifies these three attributes as the most important topics in the ecological dimension. Comparing the characteristic of these top topics with the other attributes, we conclude that travellers rate what they can see, and/or experiences directly at the destination as more sustainable in the ecological dimension.[13] The only exception is the provision of public transport which also directly influences holiday experiences.

[11] This result partially confirms the results from TripAdvisor (2010) which finds that the most important factors for a hotel to be considered green are energy and water, conservation and the use of recycled paper.

[12] The detailed statistical results of the Sidak T-test and all other statistical tests which are mentioned in this text are available upon request from the authors.

[13] The last attribute that is related to the holiday experience is the availability of public transport. The mean value of this attribute is not statistically significantly different from the mean value of the three top topics. However, it is not listed among the top topics because the share of respondents agreeing is clearly lower.

It is an interesting result that CO2-compensation was rated rather badly: CO_2-compensation is perceived as not sustainable by 53% of the respondents, although CO2-emission is one of the hot topics in sustainability and most of the environmental externalities (i.e. CO2-emissions) are caused by the journey to the destination. Another attribute with a high impact on the environment and which refers to the journey to the destination, i.e. prolonged stays, is also not seen as sustainable by most people, although traffic is one of the most important issues in the ecological dimension.

The most relevant attribute in the social dimension is "scenic view and cultural heritage" with 68 % of the respondents agreeing or strongly agreeing,[14] followed by "involvement of local community" (65 %) and "considering impacts of tourists on locals" (64 %) and "no discrimination" (62%) (see Figure 2). Interestingly, equal income distribution is perceived as the least relevant aspect of sustainable tourism.

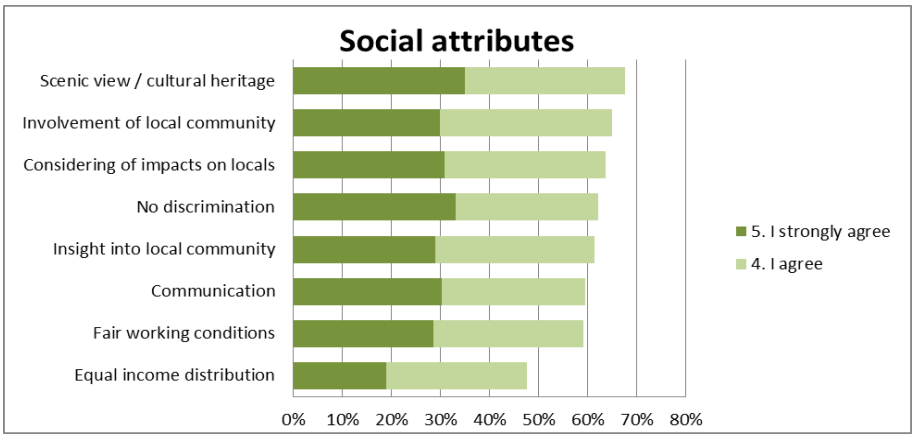

Figure 2: Social attributes of sustainable tourism products

Regarding the economic dimension, the use of local products and services, regional employment and long-term regional economic well-being are seen as relevant attributes for sustainable tourism by 66%, 64% and 62 % of the respondents respectively. This is not a straightforward result, because the economic dimension is often the least discussed and we therefore expected that economic attributes might not be as relevant compared to ecological and social attributes, since the latter ones are more often discussed in the public. The other economic attributes are perceived as less sustainable which is in line with our argumentation in section 2.3 of the long version of the article, that all other economic attributes than regional economic well-being are secondary economic attributes. However, the most important attribute in the economic dimension is the "use of local products and services" which supports the goal of a strengthening of the regional economic development. It is important to note that it is not a purely economic attribute because it includes social and ecological aspects.

[14] This is confirmed by the Sidak T-test.

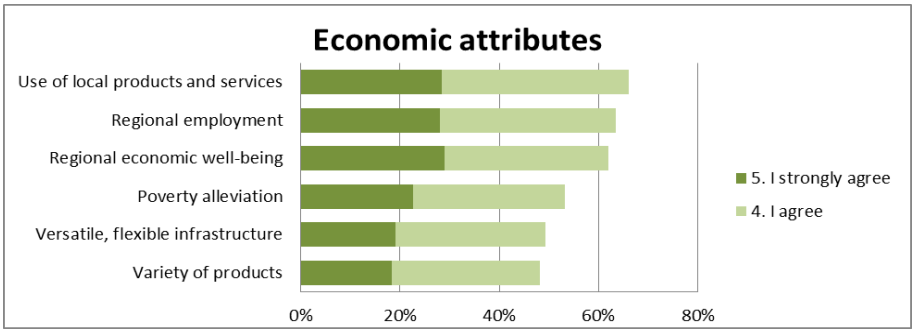

Figure 3: Economic attributes of sustainable tourism products

In general, it seems that local aspects are the most relevant attributes of sustainable tourism, since attributes referring to *local* products, *local* community and *local* culture are judged as most sustainable. The attributes referring to local aspects often address more than one dimension. For example, the use of local products ensures that income remains within the region (economic dimension), and lessens negative ecological externalities because they do not have to be transported from far away. Sims (2009) finds similar results focusing on the role local food can play within the holiday. She argues that "local food can play an important role in the sustainable tourism experience because it appeals to the visitor's desire for authenticity within the holiday experience." Local products link travellers to the region and give them the feeling of experiencing the destination and its specialties better.

3.2.3. Factors influencing the decision to book a holiday

In addition to the understanding of sustainable tourism, the people questioned were also asked how important sustainability is among other aspects when they book vacations. Therefore, the respondent had to rank eight aspects that are relevant for booking decisions. Before sustainability is considered in the decision to book a holiday, other factors are of importance: Tourists want to be sure that the weather/climate fits their need, that the price is good, that they can easily travel to the destination, etc. Sustainability is consequently second last in the resulting ranking:

1. Weather/climate
2. Price
3. Accessibility to and from the destination
4. Local culture
5. Landscape
6. Food
7. Sustainability
8. Local activities

Looking at the country level, sustainability is always second last or last except for Brazil and Russia, where it is ranked 4th and 5th respectively. This result can be explained by the high percentage of people with higher education in the samples from Brazil and Russia. Better educated people are more aware of the problems associated to the environment, society and economy caused by tourism, and are therefore more likely to consider sustainability when booking. More highly educated people with a higher income are included in these countries because is a sample of travellers. Only people from the upper classes can afford to travel whereas in Europe and the USA most people travel.

In general, the ranking above does not offer evidence for sustainability being important in booking decisions. The classical criteria such as "weather/climate", "price", and "accessibility to and from the destination" are clearly the most important ones. However, for 22% of the respondents, sustainability is among the top three factors. This 22% of respondents can therefore be considered as an important target group for sustainable tourism. This is some initial evidence, that there is potential for sustainable touristic offers. Those tourists which are called "sustainability aware tourists" in the following are described in more detail in section 3.3.6.

3.3. Typology of tourists with respect to their understanding of sustainable tourism

It is one of the aims of the study to identify different types of tourists who can be described by their different understanding of sustainable tourism. The applied factor analysis, as briefly described in section 3.1, leads to a typology of five clusters. An overview of these different types shows two major groups: the balanced type and its opposite, the sceptic (57.6 % in total). The balanced type has an above average share of agreement (values of 4 and 5) in all dimensions, and the sceptic type has below average shares in all dimensions. Furthermore, there are three strong minorities: the socio-economic, localised and ecological type (totally 42.4 %) as shown in Figure 4. These three types put stronger emphasis on some aspects of sustainable tourism, i.e. the ecologists considers ecological aspects to be particularly relevant for sustainable tourism, the localised type considers local aspects and aspects related to cultural attributes as being especially important, and the socio-economic type favours the other social and the economic attributes proposed in section 2.

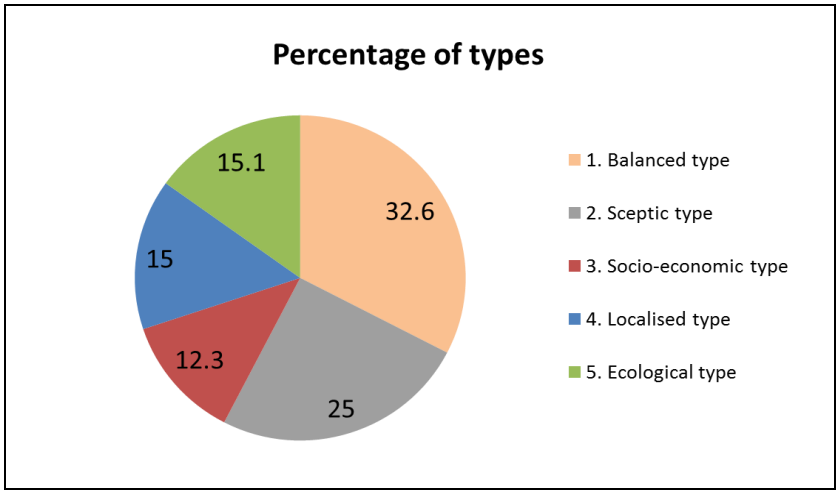

Figure 4: Types of tourists with respect to their understanding of sustainable tourism

Before explaining these types briefly in section 3.3.2, it is shown which attributes are of importance for which type in the next section.

3.3.1. Attributes related to the sustainability types

The factor analysis, which was conducted in order to find the sustainability types, assigns the attributes to one of three factors. These factors are equivalent to the socio-economic, localised and ecological types. There are no factors for the balanced and the sceptic type since the balanced type is characterised by an above average share of agreement in all dimensions. Similarly, the sceptic agrees much less with the statements about sustainable tourism in all dimensions. The greenly shaded areas indicate which attribute is assigned to which cluster.

	Socio-economic	Localised	Ecological
Ecological Attributes			
Public transport		■	
CO_2-compensation			■
Prolonged stays		■	
Renewable energy			■
Resource efficiency			■
Embodied energy			■
Adapted comfort		■	
Minimisation of waste / Waste management			■
Biodiversity			■
Social Attributes			
No discrimination	■		
Fair working conditions	■		
Equal income distribution	■		
Involvement of local community	■		
Transparent and credible communication	■		
Insight into local community and culture		■	
Consideration of impact on locals and their culture		■	
Scenic view / cultural heritage		■	
Economic Attributes			
Long-term regional economic well-being	■		
Regional employment	■		
Variety of products	■		
Versatile, flexible infrastructure	■		
Use of local products and services	■		
Poverty alleviation	■		

Table 2: Assignment of attributes to clusters

Most of the ecological attributes are assigned to the ecological type, as can be seen in Table 2. Only CO_2-compensation, prolonged stays and adapted comfort are not assigned to the ecological type. However, it should be noted that the last two attributes should be interpreted carefully, as noted before in section 3.1. These three attributes are assigned to the localised type. However, it is more important that all attributes of the social dimension which cover cultural aspects are assigned to the localised type. The other social attributes and all economic attributes are allotted to the socio-economic type.

3.3.2. Detailed description of the sustainability types

The *balanced type* seriously observes all three dimensions and has above average shares of agreement in all dimensions: Perhaps it is not possible to respect all three dimensions in every single decision of everyday life, but this type tries to find a balance between them in the course of time. 33% of the respondents belong to the balanced type.

The *sceptic type* has a critical attitude, and rates all attributes clearly lower, i.e. agrees much less with the statements about sustainable tourism in all dimensions. One possible reason could be that these people find the proposed attributes not strict enough, i.e. they are not sustainable enough for them. Another possible reason is that these people find the idea too complicated or too sophisticated. Furthermore some of the sceptics might think that the related problems, for example of climate change, are not so dangerous or that one person alone cannot have any effect on such global problems and that it is the responsibility of politicians and the states. 25% of the respondents belong to the sceptic type.

The *socio-economic type* particularly considers the social and economic dimension: These people are focused on good relations and partnerships between human beings. It seems to be clear that the socio-economic type recognises better than the other types – apart from the balanced type – the links between sustainability and poverty alleviation and long-term regional economic well-being. The socio-economic type hopes more than the other types that sustainable tourism leads to a more equal income distribution within the local community. For the socio-economic type, sustainable tourism does not discriminate against either employees or guests on grounds of nationality, age, gender, disability etc., offers fair working conditions (working hours, health, safety) and offers the possibilities for continuing education are important aspects of a sustainable tourism. The involvement of the local community in the development of tourism is seen as an integral part of sustainable tourism. From the point of view of a socio-economic type, sustainable tourism should contribute to the regional economic well-being, to the maintenance of regional employment and the development of new jobs within the region, which also offers adequate wages, and it should use local products and services while paying an adequate and fair price. Finally, credible and transparent communication is important for the socio-economic type. 12% of the respondents belong to the socio-economic type.

The *localised type* especially rates the attributes related to local aspects of sustainability and to culture as relevant for sustainable tourism. They want to enjoy an authentic holiday experience. Sustainable tourism offers interesting cultural experiences which are authentic and match with the history and traditional culture of the region without simply conserving it. It is important for them that sustainable tourism provides an insight into the local cultural, social and economic development and into the local community and that it considers the impact of tourism on the local population and their culture, respecting the needs and traditions of the local population. Furthermore, the cultural heritage should be taken care of, for example buildings and monuments, including the landscape. The *localised type* also wants to enjoy local products, be part of the local community and be sure that the local community is involved in and benefits from tourism. Additionally, this type also agrees with the importance of a good provision of public transport to and from and at the destination, although he has very low shares of agreement for the other ecological attributes, which for some attributes such as "use of renewable energy" are even below 10%.[1] 15% of the respondents belong to the localised type.

The *ecological type* values in particular the ecological dimension: The relationship between humans and nature or the environment is fragile. Taking care of the environment and a better and efficient management of energy and other resources is crucial. This type has a remarkably

[1] From the ecological dimension, the attributes" prolonged stay" and "adapted comfort" are also assigned to the cultural type. These two attributes are not considered in the discussion of the types, since there are some doubts whether the respondents have correctly understood the meaning of these two attributes, as discussed in section 4.1.

high share of agreement with CO_2--compensation (67%).[15] Besides estimating the environment, the ecological type also often considers the upkeep of a landscape and the cultural heritage as relevant for sustainable tourism as well as the other two main attributes of the localised type, "insight into local community and culture" and "considering of impacts on locals and their culture". However, the other social attribute as well as the economic attributes[16], are judged less relevant for sustainable tourism. 15% of the respondents belong to the ecological type.

3.3.3. Socio-demographical and geographical structure of the sustainability types

The following tables (Table 3 - Table 7) give an idea of the socio-demographical and geographical structure of the five types. We define the following notions of differences for the descriptive statistics regarding deviations in percentage points:

- +/- 3 – 4.9 = Slightly more/less
- +/- 5 – 9.9 = more, fewer
- +/- 10 + = much more/fewer

Balanced type: 32.6 %	
Socio-demography	• Age distribution near average, but the older they are, the higher is the share of balanced types. • A few more women (50.6%, deviation +3.1) • A few less with a middle level of education (23.5%, deviation -4.1) • More from the higher education level (71.0%, deviation +5.3) • Income level near average
Country	• Many more Brazilians (51.1%, deviation +18.5) • Many Indians (38.9%, deviation +6.3) • Slightly fewer Swedish (29.2%, deviation -3.4) • Slightly fewer British (28.0%, deviation -4.6) • Fewer Russians (27.3%, deviation -5.3) • Fewer Germans (23.3%, deviation -9.3)
Normally booking online	• Slightly more "yes" (71.9%, deviation +4.2)
Know sustainable tourism products	• More "yes" (41.7%, deviation +8.1)
Have ever booked sustainable tourism products	• More "yes" (26.2%, deviation +5.9)

Table 3: Socio-demography of the balanced type

Tourists from the balanced type more often know sustainable tourism products and book them more often than travellers from other groups. The socio-demographic structure of the balanced type as a whole is influenced by a high percentage of respondents from Brazil and India and their exceptional situation of high levels of education.[17] The knowledge about and the affinity

[15] Only the balanced type has a higher share of agreement with CO2-compensation with 79%, whereas only 13% of the cultural type, only 12% of the sceptic type and 54% of the social type agree with it.

[16] The only exception in the economic dimension is the attribute "use of local products and services", which is considered as relevant by all types apart from the notorious sceptical sceptic type.

[17] Since only travellers are included in the sample, people with a high income and higher education are overrepresented in our sample from Brazil, and people with a higher education from Russia and India. This is consistent with the shares that were obtained for the World Travel Monitor 2009 and is not a surprising result, because in these countries not all people have the

towards sustainability is logically higher. Furthermore, it is interesting to note that the older a traveller is, the higher is the probability that he belongs to the balanced type. There are also only small differences between genders, as is observed for most of the types below. This confirms findings from Rheem (2009).

Sceptic type: 25.0%	
Socio-demography	• Age distribution near average, slightly more 15-24 year olds (16.7%, deviation +3.4) • Slightly more men (56.5%, deviation +4) • Slightly more lower education level (11.5%, deviation +4.8) • More of a middle level of education (33.0%, deviation +5.4) • Much fewer of a high level of education (55.5%, deviation -10.2) • Slightly more lower (12.1%, deviation +3.3) • Slightly fewer higher income group (42.1%, deviation -3.9)
Country	• Much more Germans (37.8%, deviation +12.8) • More British (31.3%, deviation +6.3) • Slightly more US Americans (28.6%, deviation +3.6) • Slightly more Swedish (28.5%, deviation +3.5) • Slightly fewer Russians (21.1%, deviation -3.9) • Slightly fewer Swiss (20.5%, deviation -4.5) • Much fewer Brazilians (9.6%, deviation -15.4)
Normally booking online	• Slightly fewer (64.4%, deviation -3.3)
Know sustainable tourism products	• Fewer "yes" (27.8%, deviation -5.8)
Have ever booked sustainable tourism products	• Slightly fewer "yes" (16.1%, deviation -4.2)

Table 4: Socio-demography of the sceptic type

The sceptical feeling towards sustainability is more widespread in some of the Western countries such as Germany, Sweden, Great Britain and the USA. Sustainability is more often discussed in the public in these countries than in developing countries. Therefore, travellers more often reflect the concept of sustainable tourism and are able to assess it more critically and/or have higher requirements towards the term sustainable tourism. It is also noteworthy that men are overrepresented among the sceptics and that there is an above average share of sceptics among young travellers. The sceptics are according to their critical evaluation of sustainable tourism also a little less likely to book sustainable tourism products.

possibility to travel due to too small incomes. Furthermore it should be noted that only people having internet access could be interviewed, which caused the overrepresentation of young people in most countries. This explains the surprisingly lower share of respondents with a higher income level compared to the high share of respondents with a high level of education from Russia and India. Another explanation of this is that there are much more young people who are still students and/or do not earn a lot of income in the Russian and Indian samples.

Socio-economic type: 12.3%	
Socio-demography	• Slightly more men (56.9%, deviation +4.4%)
Country	• More British (17.6%, deviation +5.3%) • Fewer Russians (5.5%, deviation -6.8%)
Normally booking online	• Near average (69.1%, deviation +1.4)
Know sustainable tourism products	• Fewer "yes" (26.8%, deviation -6.8%)
Have ever booked sustainable tourism products	• Fewer "yes" (15.2%, deviation -5.1%)

Table 5: Socio-demography of the socio-economic type

The only particular socio-demographic characteristic is the small overrepresentation of men. The socio-economic type is quite in the average regarding the other socio-demographic characteristics. Interestingly, there are more socio-economic types in Britain and fewer in Russia. Generally, fewer of the socio-economic type know sustainable tourism products and have ever booked a sustainable product.

Localised type: 15.0%	
Socio-demography	• More women (53.4%, deviation +5.9%) • Slightly fewer of an upper income level (41.6%, deviation -4.4%)
Country	• Many more Russians (38.0%, deviation +23.0%) • Slightly fewer Germans (10.8%, deviation -4.2%) • Fewer Swiss (9.5%, deviation -5.5%) • Fewer British (9.5%, deviation -5.5%) • Fewer Brazilians (6.7%, deviation -8.3%)
Normally booking online	• Fewer "yes" (58.2%, deviation -9.8)
Know sustainable tourism products	• Near average (35.5%, deviation +1.9)
Have ever booked sustainable tourism products	• Near average (23.0%, deviation +2.7)

Table 6: Socio-demography of the localised type

The localised type is a type that is prevalent in Russia, and more women and slightly fewer of the upper income bracket are among the localised type.

The typical ecologist is characterised by an upper educational and income level and a higher age. Furthermore, the political importance of the ecology in the country of the respondent seems to have a positive influence as there are, for example, more ecological types from Switzerland. However, slightly fewer people of the ecological type know sustainable products have already booked a sustainable tourism product.

Ecological type: 15,1%	
Socio-demography	• Slightly fewer 15-24 years old (10.3%, deviation -3%) • Slightly more 35-44 years old (26.0%, deviation -3.1%) • Slightly more of a higher level of education (69.5%, deviation +3.8%) • Slightly fewer of a lower middle income (14.7%, deviation -3.9%) • More of an upper income level (51.7%, deviation +5.7%)
Country	• More Swiss (23.7%, deviation +8.6%) • More Brazilians (22.0%, deviation +6.9%) • Fewer Indians (8.5%, deviation -6.6%) • Fewer Russians (8.2%, deviation -6.9%)
Normally booking online	• Slightly more "yes" (72.5%, deviation +4.8)
Know sustainable tourism products	• Slightly fewer "yes" (29.6%, deviation -4%)
Have ever booked sustainable tourism products	• Slightly fewer "yes" (16.2%, deviation -4.1%)

Table 7: Socio-demography of the ecological type

3.3.4. Booking behaviour

The knowledge of sustainable products is relatively low, as is the booking rate. Overall, the balanced type is the most interested in sustainable tourism products (see Figure 5).

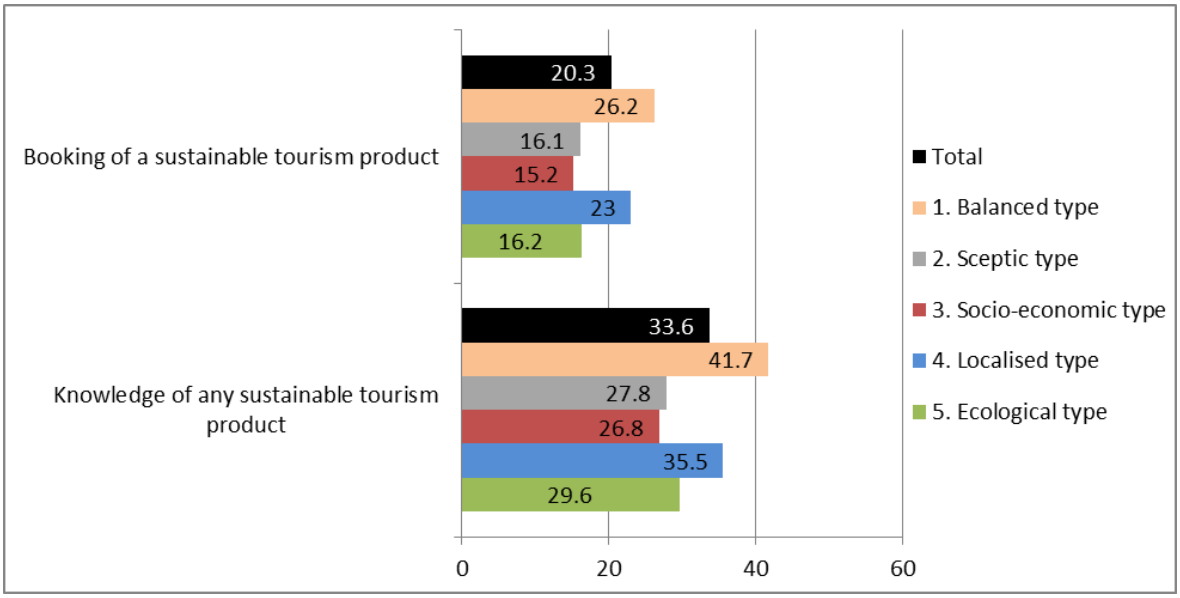

Figure 5: Booking behaviour

Looking at the knowledge of sustainable tourism products and the booking of sustainable tourism products, the same conclusions can be drawn. The balanced type has the highest share of respondents with knowledge of sustainable tourism products, followed by the localised type. The same holds for the shares of respondents having already booked a sustainable tourism product. Therefore, looking at the booking behaviour in the past, the balanced type and the localised type could be called key target groups of sustainable tourism products. 26.2% of the balanced type and 23.0% of the localised type have already booked a sustainable product. The socio-economic and ecological types are target groups where the market share of sustainable tourism product could be expanded by a target group oriented development of new products, whereas it could be difficult to develop a new sustainable product which convinces the sceptic type.

3.3.5. Factors influencing the decision to book a holiday

The ranking of the factors influencing the booking decision can be divided into the different types. Overall, sustainability was only ranked as the seventh most important factor.

Rank	Balanced	Sceptic	Socio-economic	Localised	Ecological	Overall
1.	Weather / Climate	Weather / Climate	Weather / Climate	Weather / Climate	Weather / Climate	Weather / Climate
2.	Price	Price	Price	Price	Price	Price
3.	Accessibility	Accessibility	Accessibility	Accessibility	**Landscape**	Accessibility
4.	Landscape	Local culture	Local culture	**Food**	Accessibility	Local culture
5.	Local culture	Landscape	Landscape	Landscape	Local culture	Landscape
6.	Food	Food	Food	Local culture	Food	Food
7.	**Sustainability**	Local activities	**Sustainability**	Local activities	**Sustainability**	**Sustainability**
8.	Local activities	**Sustainability**	Local activities	**Sustainability**	Local activities	Local activities

Table 8: Rating according to importance in decision to book a holiday

For most types, the ranking is similar to the overall ranking, and sustainability, together with local activities, are always ranked 7th or 8th. The two most important factors (weather/climate, ranked first, and price, ranked second) are also always the same. Only food is clearly better ranked for the localised type[18] and landscape for the ecological type. This fits into the profile of these types. Good and authentic food is a crucial element of the vacations for a traveller for whom the local experience is a central aspect of travelling, and landscape is part of the environment and therefore more important for an ecological type.

[18] However the differences between the average values of food (4.57), landscape (4.58) and local culture (4.59) are very small.

3.3.6. The key target group: Sustainability aware tourists

22 % of all respondents rank sustainability among the top three factors influencing their decision to book a holiday, as already stated in section 3.2.2. These tourists who are called sustainability aware tourists are the key target group, because they consider sustainability when booking holiday. This interesting group is discussed in this section.

If we look at the share of respondents who rank sustainability among the top three factors influencing their decision to book a holiday at the level of each cluster, the following shares are observed:

- 26 % of the balanced type
- 20 % of the sceptic type
- 21 % of the socio-economic type
- 18 % of the localised type
- 18 % of the ecological type

This is again evidence that the balanced type has the highest potential to buy sustainable products. It is surprising that a higher share of sceptics rank sustainability among the top three factors compared to the ecological who are actually more sensitive to sustainable tourism when we look at the ratings of the attributes. Some sceptics actually consider sustainability as important when booking, but are very critical when assessing if a product is sustainable.

The ranking of factors influencing the decision to book a holiday does not show large deviations from the average over the whole sample:

1. Sustainability
2. Weather / climate
3. Accessibility
4. Price
5. Local culture
6. Landscape
7. Food
8. Local activities

Sustainability is the most important factor. The order of the other factors has not changed, except that price is less important than accessibility and no longer belongs to the top three factors.

In general, the sample of sustainability aware tourists is characterised by a slightly higher rate of agreement with the attributes describing sustainable tourism, compared to the sample including all respondents. However, the sustainability aware tourists consider mostly the same attributes as most relevant as the average respondent of the whole sample, as can be seen further below. The higher rate of agreement can be explained by the higher share of the balanced type compared to the total sample including all respondents (see Figure 6).

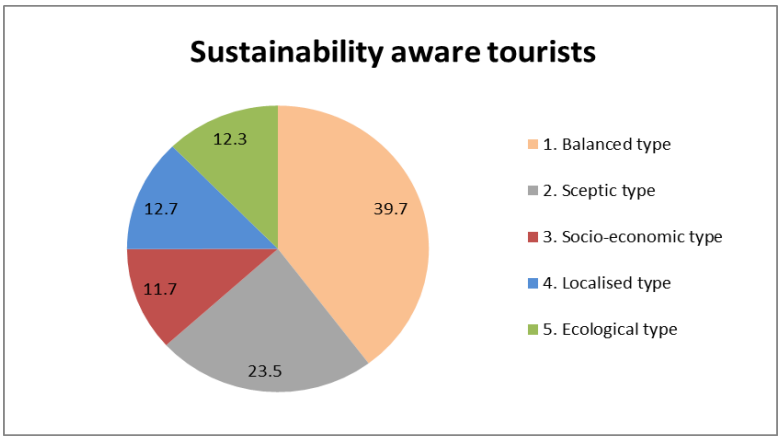

Figure 6: Types of sustainable aware tourists with respect to their understanding of sustainable tourism

Besides the clearly greater share of balanced types, the shares of the sceptic type and the localised and ecological types are slightly lower. However, we cannot identify a typical type which is clearly more likely to consider sustainability in his/her booking decision. All types are still considerably represented. It can therefore be concluded that the consideration when booking is independent of the sustainability type. However it should be kept in mind that different aspects of sustainable tourism are important for the different types which will influence their booking behaviour when they face a real sustainable tourism offer. An ecological type, for example, is more likely to book a product that is sustainable from an ecological point of view but does not explicitly consider economic aspects.

Sustainability aware tourists agree generally more often with the proposed attributes of sustainability, although the differences are rather small. Therefore, the shares of agreement with the ecological attributes are higher (see Figure 7).

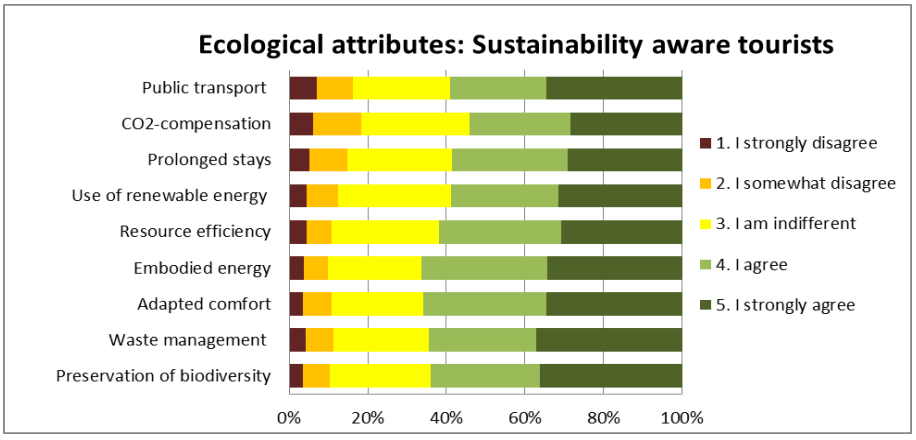

Figure 7: Ecological attributes of sustainable tourism products, rated by sustainability aware tourists

Clearly, “embodied energy” has an especially higher share of agreement. This attribute is more complex to understand than other attributes. Tourists willing to consider sustainability in their booking decisions have better knowledge of sustainable tourism and are therefore capable of understanding the idea of more complex attributes.

There are also higher shares of agreement in the social and economic dimension. Again, the differences to the overall sample are quite small (see Figure 8 and Figure 9).

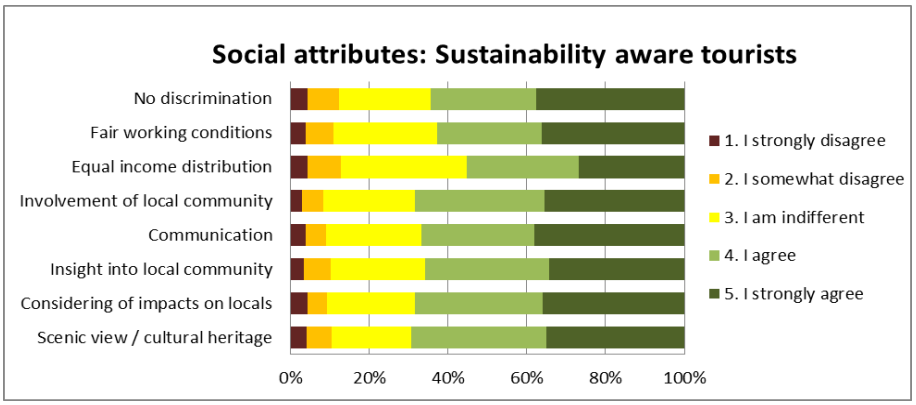

Figure 8: Social attributes of sustainable tourism products, rated by sustainability aware tourists

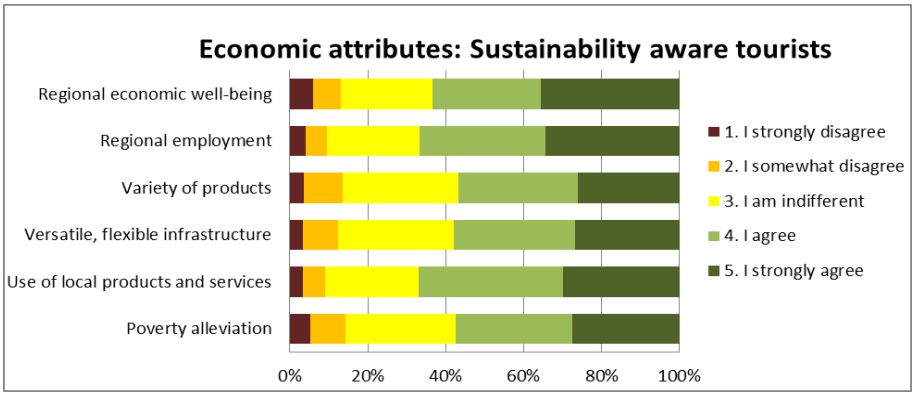

Figure 9: Economic attributes of sustainable tourism products, rated by sustainability aware tourists

Sustainability aware tourists are also more likely to know about sustainable tourism products (49.9% compared to 33.6% over all respondents) and to book sustainable tourism products (36.4% compared to 20.3% over all respondents). It is interesting that, especially from the sustainability aware tourist type, relatively more persons belonging to the balanced type book sustainable tourism products: 41.8% have already booked such a product (see Figure 10). Again, as in the case of the booking behaviour of all respondents (see section 3.3.4), the balanced type could be called the key target group of sustainable tourism, looking at previous booking behaviour. The other types, except the sceptic, are target groups for whom the market share of sustainable tourism products could be expanded.

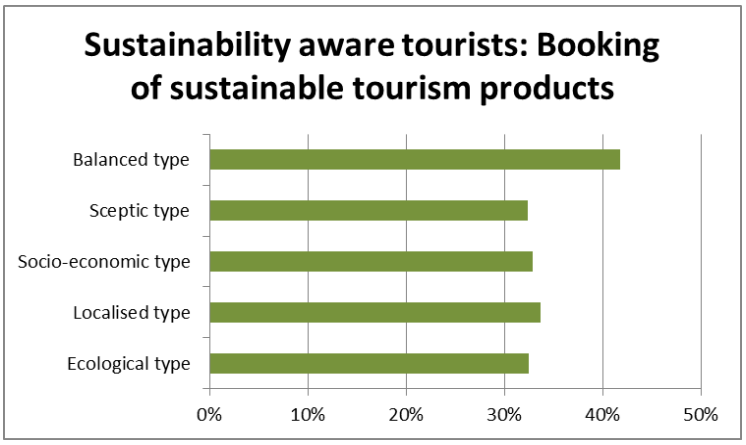

Figure 10: Booking behaviour of sustainability aware tourists

3.4. Specifics of countries

In this section, the most interesting differences of the responses of some specific countries compared to the average over all countries are presented without going into a detailed interpretation. The detailed analysis for each of the eight countries can be found in the appendix.

3.4.1. Differences in the assessment of the attributes

Generally, the Germans are most critical and almost all attributes have lower shares of agreements. The British are also more critical than the average: They assess the ecological and the social attributes more critically, and it is astonishing that less than 50% judge the upkeep of a landscape and the cultural heritage as an attribute of sustainable tourism, because it is one of the most important attributes for all other countries. Also the Russians are more critical regarding the presented attributes of sustainable tourism. They are especially critical regarding energy related ecological attributes such as "CO_2-compensation", "use of renewable energy", etc. The answers of the respondents from the USA (and the distribution of the different types) correspond mostly to the average, except that lower agreement rates for ecological attributes are observed.

There are generally higher shares of agreement from Brazilian respondents and there is a higher agreement with social attributes from Indians. The attribute "equal income distribution" has an especially higher share of respondents from Brazil and also India agreeing. This is not surprising, since poverty is a more relevant issue in these developing countries, and the respondents are therefore more sensitive to it compared to the respondents in the richer western industrialised countries.

There are interesting differences in the assessment of the sustainability of CO_2-compensation in the different countries (see Figure 11): If we compare the outcome in the different countries, the Germans are most critical, with 65% of the respondents who do not assess it as sustainable. The US-Americans and Russians are also very critical with respect to CO_2-compensation. The assessment of the Russians is especially interesting, since they rate it very badly and are clearly more critical compared to the other ecological attributes (70% of respondents do not agree). The same holds for the attribute "use of renewable resources" with which 67% of respondents do not agree.

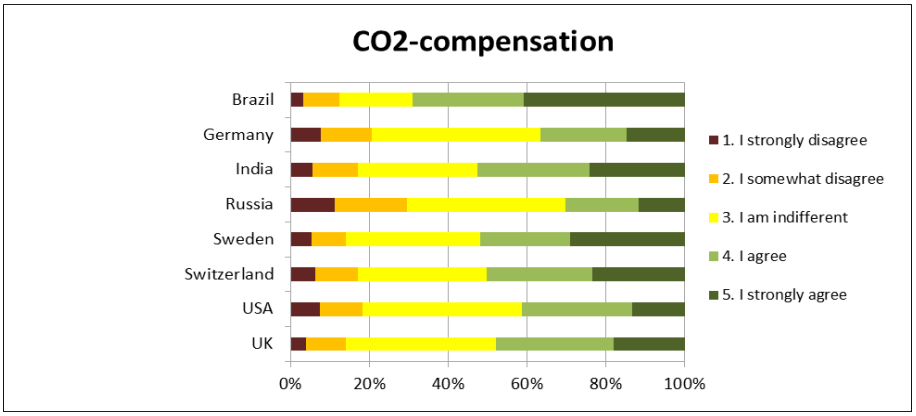

Figure 11: Rating of CO_2-compensation

3.4.2. Differences in the factors influencing the decision to book a holiday

Although sustainability is ranked as the last or second last factor influencing the decision to book a holiday in most countries, there are some deviations in some countries from the ranking over all countries as presented above in section 3.2.3: The Indians and the Brazilians rank sustainability higher. It is ranked fourth in India and fifth in Brazil. This result is verified by looking at the share of people for whom sustainability is among the top three influencing factors in the decision to book a holiday in Table 9: The share is lower in the western industrialised countries and higher in India, Brazil and also Russia.

Country	Share
Brazil	36.1 %
Germany	16.8 %
India	41.3 %
Russia	21.9 %
Sweden	15.4 %
Switzerland	17.4 %
Great Britain	12.1 %
USA	14.3 %

Table 9: Share of respondents with sustainability among the top three influencing factors in the decision to book a holiday in eight countries

The reason for the higher rank of sustainability in India and Brazil is that a lot of the respondents belong to the group of people with a higher level of education. Since sustainability is a complex concept, a higher education facilitates the understanding of it and therefore also the ability to appraise its importance and the willingness to take measures towards sustainability.

Looking at the other factors influencing the decision to book a holiday, it can be observed that in general there are no large deviations from the average ranking over all countries. The only differences worth noting are the following:

- Local culture is ranked first and price only sixth in Brazil.
- Indians also rank local culture better. However, price remains the second most important factor in India.
- Food is more important for Russian tourists, as it is ranked third and accessibility to and from the destination is less important (rank 6) compared to the overall ranking over all countries.
- Landscape is ranked second and price only fifth in Switzerland, which differs from the average over all the countries.
- As in Switzerland, price is also ranked lower in Germany (rank 6) and landscape higher (rank 3).

3.4.3. Differences in the distribution of the types of tourists

If the representation of the five identified types in the eight countries is compared, the following country-specific results can be observed:[19]

- The different types have more or less the same proportions in Sweden and the USA, and do not heavily deviate from the average over the whole sample.
- Brazil and India have the greatest percentage of balanced types. In Brazil more than half of the respondents belong to the balanced type group. However, these two countries differ in importance regarding the other types: In Brazil, the ecological type is the second most important type (22%) whereas in India, the sceptic is the second most important type (22.5%) and the ecological type plays a minor role.
- Germany has the biggest number of sceptics, and in Great Britain, the sceptic is also the most important type.
- Russia has the highest share of the localised type. It amounts to 38% and is the most important type in Russia.
- Russia and India have the lowest share of the ecological type.

Switzerland has the highest share of the ecological type, whereas the balanced type is still the most important type.

[19] The graphics related to these findings can be found in the long version of this article.

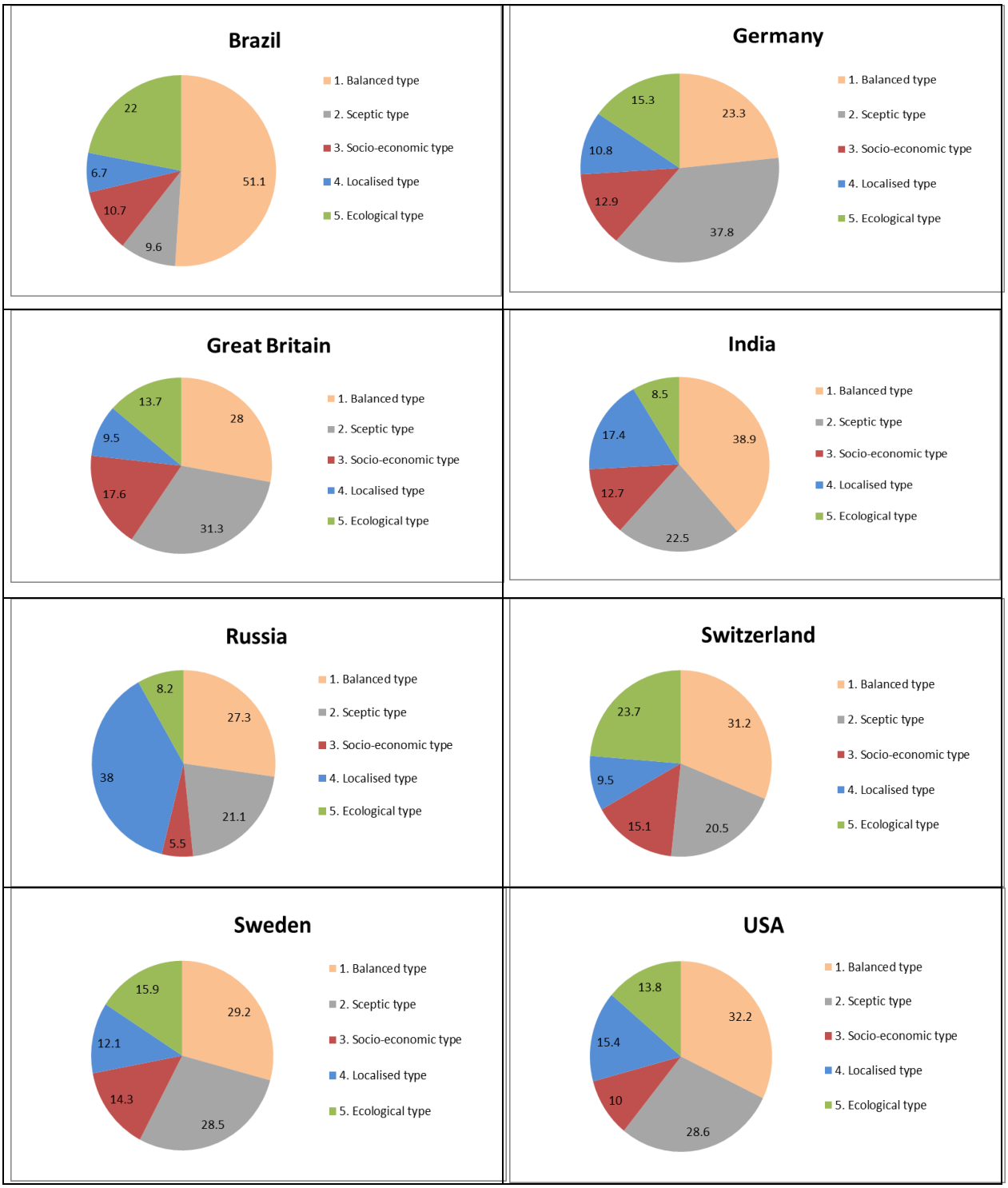

Figure 12: Types of tourists with respect to sustainability in eight countries

4. Do tourists book sustainable products? – A choice experiment

The question remains whether sustainable products are actually bought by tourists and if they are willing to pay more for sustainable products, because sustainable products are often more costly. To answer this question, a choice experiment with 4,796 Swiss travellers was conducted. Before discussing the empirical survey, a short literature survey is presented. This complements the discussion of demand and the market potential in section 1 and focuses on choice models,

Choice models belong to the so-called "stated preference" methods. They are normally used when no market data exist to observe preferences for a product and/or the willingness to pay for it. In choice models, the marginal willingness to pay (MWTP) is not questioned explicitly (as it is the case in contingent valuation) but implicitly. The main idea, based on the Lancasterian utility theory, is that products can be described by their characteristics and that every single attribute contributes to the utility a consumer derives from a product. Hence, changes in the attributes alter the utility derived from consuming a specific good. Changes in these single attributes and their impact on the utility of consumers are measured in choice experiments. Holidays for example have a lot of attributes: price, location, accommodation, mean of transportation to the destination, etc. The respondents are asked to choose between alternatives which are described using the attributes in a choice experiment. In the case of this study, the respondents had, for example, to choose between a product which was unsustainable and a product which was sustainable in some attributes, as for example in the use of local products. Furthermore, it is crucial that choice experiments always include a price attribute in order to derive realistic results. The result of a choice model is information on the existence and size of trade-offs between the included attributes. A trade off exists if the respondents are willing to give up something in order to get a higher level of an attribute. The measurement of these trade-offs allows the researcher to obtain an impression of which specific characteristics of a product significantly influence the value of the product. This allows the calculation of the willingness to pay regarding changes in different attributes. The concrete application of the choice model in this study is explained in detail in section 4.1.

The article of Brau and Cao (2008) is a good example for the application of choice models in the context of tourism research, looking among other things at the influence of environmental quality on the willingness to pay for a week's holiday in a good quality three star hotel for a beach and seaside vacation. Their attributes for the choice experiment are:

- Proximity of main tourist attraction
- Risk of overcrowding at main point of attraction
- Uncontaminated and unspoilt natural environment as a primary attraction
- Availability of recreational services
- A natural reserve in the vicinity of the holiday location
- Daily cost per person per night (half board accommodation in a 3 star hotel)

Different quality levels are assigned to these attributes. They key finding is that "people mostly dislike a high risk of overcrowding and a shift from maximum to minimal environmental quality." They find large monetary values with a willingness to pay for a maximal environmental quality of 64.75 Euros compared to the situation with minimal environmental quality.

Discrete choice modelling has been further applied to the analyses of the effects of different characteristics of an accommodation facility on the willingness to pay of tourists (as for example in Morimoto, 2005 and Morley, 1994). Discrete choice models have also been applied to

destination choice in general (Huybers, 2003b; Huybers and Bennett, 2000), to determine the important factors for short-break holiday destination choices (Huybers, 2003a) and to measure the willingness to pay for visits to a national park (Verbic, 2009). Hearne et al. (2002) apply a choice model to the management of protected areas in Costa Rica and show that "choice experiments are a feasible mechanism to analyse user preferences". However, there are no studies that directly apply discrete choice models to sustainable tourism products.

4.1. Empirical method

A choice experiment is employed in this second empirical phase because there is not enough real data from the tourism market to measure the demand of tourists regarding sustainable tourism products. Questions related to the booking of sustainable tourism products and to the willingness to pay can therefore only be answered by employing so-called "stated preference" methods. A choice model is used in this study because it is best suited for analysing the influence of characteristics of a product (the so-called attributes) on demand for a product.

Two surveys using different offers were conducted in Switzerland. The first one is regarding a safari in South Africa, lasting two weeks, as offered by Kuoni during winter 2011. The guided safari leads the tourists through the unique landscapes of South Africa, starting in the North in the famous Kruger National Park, further through Swaziland and the Hluhluwe National Park and finally following the famous Garden route to Cape Town. The minimum standard for all overnight stays is a four star hotel. The basic offer costs 4,900 Swiss Francs ($ 5,440). This price is all inclusive, also including the flight from Switzerland to South Africa. The second basic product is a two week beach holiday in a bungalow in the Maldives with a price of 3,300 Swiss Francs ($ 3,663), as offered by Kuoni. The choice experiment using the example of South Africa is discussed first in the following. Subsequently, only the differences of the Maldivian example compared to the example of South Africa are presented.

The basic products described above are altered in the choice experiment: Some attributes describing sustainable tourism are added to the normal description in the Kuoni prospectus in order to compare different products on different sustainable levels. However, it is impossible to include all 23 attributes of the first phase of the understanding of sustainable tourism. Therefore, the most relevant attributes of the first phase were identified and the following attributes of sustainable tourism are used in the choice experiment:

- Use of local products
- Environmental management (energy, water and waste)
- Working conditions
- CO_2--compensation

The use of local products is included because this attribute was identified as crucial for sustainable tourism products in section 3.2.2. In the ecological dimension, waste management and other aspects which can be experienced by the tourist are the most important attributes in the ecological dimension. Therefore, environmental management, including energy, water and waste, is put together in one attribute. "Working conditions" is incorporated because no discrimination is seen as a very relevant aspect in the social dimension. Finally, CO_2--compensation was chosen because it is a highly debated topic and because it is a product included by a lot of sustainable tourism providers.

During the choice experiment, the respondents had to make 14 choices. Each choice was composed of two products which considered the included attributes of sustainable tourism differently and a zero option. Table 10 presents the attributes and a detailed description of the levels of the attributes.[20] Please note that the prices for the experiment using the example of South Africa are listed and that the lowest price is the official price in the catalogue of Kuoni. With each higher price level, the price increased again by 50 Swiss Francs ($ 55.5).

Variable name	Level	Description
Price	4,900 CHF	
	4,950 CHF	
	5,000 CHF	
	5,050 CHF	
	5,100 CHF	
	5,150 CHF	
	5,200 CHF	
CO_2--compensation	No CO_2-compensation	
	CO_2--compensation	The CO_2-emissions caused by the outward and return journey are compensated through the support of climate protection projects.
Local products	Almost no local products	Almost no local products are used.
	Local food	There are predominantly meals made from local products on the menu.
	Local food and local building material	There are predominantly meals made from local products on the menu and the hotel was built by using mainly local building material.
Environmental management	No measures	Waste lies partly around, there are no sewage plants, and the energy use is not controlled.
	Some measures	No waste lies around, untreated sewage does not flow into the sea and basic measures towards an efficient use of energy are taken, for example the use of energy-saving lamps.
	A lot of measures	Waste is minimised, separated, composted and recycled, sewage is completely treated in sewage plants and energy is used efficiently.
Working conditions	Unclear working conditions	The working conditions were not controlled.
	At least fair wages	Fair wages are paid. The other working conditions were not controlled.
	High international standards	Fair wages are paid and the working conditions satisfy international standards.

Table 10: Attributes and levels used in the choice experiment "South Africa"

[20] Some screen captures of some pages of the original online survey in German are shown in Appendix A6 in order to allow for a clearer picture of what the survey looked like.

Although the attribute "upkeep of a scenic view and the cultural heritage" is considered as essential from a tourists' perspective, it is not considered in the choice experiment because it would be hard to distinguish if the utility generated by this attribute is due to the direct effect of a nice landscape on tourists' holiday experience or due to aspects related to sustainable tourism. There are no attributes from the economic dimension because it is difficult to describe them in a brief sentence or with a keyword during a choice experiment. The chosen attributes and their levels allow for ($7^1*3^3*2^1$) possible combinations and therefore for 126 different products. 300 different questionnaires with different selections of products and choice sets were created by using the Choice Based Conjoint (CBC) software of Sawtooth. Each questionnaire consists of 14 choice sets and questions related to travel behaviour and socio-demographics. Two of the 14 choice sets are fixed choice sets which are presented to every respondent, whereas the other twelve choice sets differed according to the 300 generated questionnaires.

A representative choice set is presented in Figure 13 in its original version in German as seen by the respondents. The respondents are supposed to choose one of the two products or the zero option "I would not choose any of these products".[21]

Figure 13: A representative choice set

[21] The first product, which costs CHF 5,200, does not offer CO2-compensation and considers almost no local products. However, a lot of environmental measures are taken and the working conditions are according to high international standards. The second product offers CO_2-compensation and considers local food and local building materials. However, it is not sustainable from an environmental perspective ("no measures") and less sustainable regarding working conditions than the first product ("at least fair wages").

Again a pilot was carried out before conducting the survey. The pilot showed that the respondents understood the question well, despite the complexity of a choice experiment. To simplify the experiment one attribute was dropped, which led to the list of attribute as presented in Table 10. Finally, the link to the definitive online survey was sent to a total of 29,123 customers of Kuoni and Helvetic Tours, two Swiss tour operators. The questionnaire was provided in German and French and the French version was also sent to the Italian-speaking population of Switzerland. Half of them have received a link to the choice experiment with the safari in South Africa and the other half the experiment with the beach holidays in the Maldives. The response rate of completed surveys was 16%. Another 10% started to answer the questionnaire but did not finish. Most of these respondents, who did not complete, finished as early as the first page, where an introductory text was presented. A second, smaller peak of people stopping their participation is observed at the beginning of the choice experiment.

	South Africa		Maldives		Total	
Initial Sample	14,574	100%	14,549	100%	29,123	100%
Response	3,788	26%	3,844	26%	7,632	26%
Completed	**2,348**	**16%**	**2,448**	**17%**	**4,796**	**16%**

Table 11: Response rates

4.2. Result of the choice experiments

In this chapter, the results of the choice experiment are presented. The case of the safari in South Africa is discussed in detail. The results of the case of the Maldives are presented only if there are some major deviations and new insights compared to the case of South Africa. The detailed tables from the case of the Maldives are presented in Appendix A7. Generally, the two experiments deliver quite similar results. In section 4.2.1, the discussion of the preferences is presented, followed by the analysis of the marginal willingness to pay for the selected attributes in section 4.2.2.

4.2.1. Preferences

The preference shares show how often a single level of an attribute has been chosen relative to the other levels of the same attribute. The zero option is not considered so that the preference shares add up to 100% for each attribute. The more sustainable levels of the attributes are chosen significantly more often and the preference shares are significantly different for all attributes ("Within Group Chi-Square" with $p < .01$), as can be seen in the tables below.

CO_2**--Compensation**

Total Respondents	2348
No CO_2--compensation	42.5%
CO_2--compensation	57.5%
Within Group Chi-Square	$p < .01$

Table 12: Preferences CO_2--compensation

Local Products

Total Respondents	2348
Almost no local products	21.7%
Local food	37.7%
Local food and building material	40.6%
Within Group Chi-Square	p < .01

Table 13: Preferences local products

Environmental management

Total Respondents	2348
No measures	14.4%
Some measure	41.3%
A lot of measures	44.3%
Within Group Chi-Square	p < .01

Table 14: Preferences environmental management

Fair working conditions

Total Respondents	2348
Unclear working conditions	18.7%
At least fair wages	36.9%
High international standards	44.4%
Within Group Chi-Square	p < .01

Table 15: Preferences fair working condition

In the case of the beach holidays in the Maldives, the respondents again significantly prefer the more sustainable levels of all attributes. The only small deviation from the previous results is that environmental management is more preferred than in the case of South Africa, with "no measures" showing a lower preference share of 11.2% in the case of the Maldives vs. 14.4 % in the case of South Africa.

4.2.2. Marginal willingness to pay for sustainable holidays

In order to derive the marginal willingness to pay (MWTP), first, an empirical estimation of a model which describes the probability of choosing a given product as a function of its attributes is made. For this purpose, a logit model was estimated, as presented in Table 16. If a higher price is expected to lead to a lower demand, i.e. a lower probability of choosing a specific product, then the estimated coefficient should be negative. If more sustainable levels of a product are expected to increase the probability of choosing a product, the estimated coefficients for the attributes should be positive. Price is linearized in this estimation, because the price steps between the levels are constantly $ 55.5 (CHF 50).

Coefficient	t ratio	Attribute
Test for significance of the model: Chi-Square: 11860		
-0.02752	-5.54540	Price
0.24331	27.09240	CO_2--compensation
		Local products
0.25550	19.05440	Local food
0.40047	29.89110	Local food and building material
		Environmental management
0.47919	35.88900	Some measures
0.60838	45.38630	A lot of measures
		Fair working conditions
0.22090	16.68810	At least fair wages
0.58993	44.15830	High international standards
-0.03818	-2.63260	None

Table 16: Results from the logit model

Each coefficient significantly has the expected value: Price has a negative influence on the probability of buying a product, i.e. the higher the price, the lower is the demand for a specific product. The attributes which describe aspects of sustainable tourism all have positive coefficients. This indicates that the more sustainable a product is, the higher is the probability that customers will buy the product.

The marginal willingness to pay for an increase in the level of an attribute is calculated by dividing the coefficient of an attribute β_i and the coefficient of the price γ.

$$MWTP = \frac{\beta_i}{\gamma}$$

This calculation leads to the following marginal willingness to pay for the attributes as presented in Table 17.

Attribute	MWTP in US dollar[22]	MWTP in percent of price
CO_2-compensation	9.8	0.18%
Local products		
Local food	10.3	0.19%
Local food and building material	17.3	0.32%
Environmental management		
Some measures	20.6	0.38%
A lot of measures	26.2	0.48%
Fair working conditions		
At least fair wages	8.9	0.16%
High international standards	23.7	0.44%
Total (sum of highest level of each attribute)	77.0	1.42%

Table 17: Marginal willingness to pay (MWTP) for selected attributes (in US dollars)"

The MWTP for the attributes is between $ 8.9 and $ 26.2. The respondents are only willing to pay $ 9.8 for CO_2-compensation of the journey to and back from the destination. CO_2-compensation from MyClimate[23] for a return flight to South Africa costs 138 US dollars (MyClimate, 2011). This is a large gap and their willingness to pay is clearly lower and clearly below the market price. This explains why only a small number of tourists actually compensate CO_2emissions of the journey as mentioned in Broderick (2008). Furthermore there is a continuing discussion and criticism about the credibility and effectiveness of CO_2-compensation (Broderick, 2008). Therefore a lot of consumers are not willing to buy CO_2-compensation.

The MWTP for the other attributes are also low, although a preference for more sustainable levels of the attributes was found in section 4.2.1. In total, the sum of the MWTP for the highest level of each attributes leads to a total willingness to pay of $ 77.1. This value is comparable to other studies. Casey et al. (2010) find in a choice experiment a mean willingness to pay for a "coral fund" in the Riviera Maya region of Mexico's Yucatan Peninsula of $55, and Brau and Cao (2008) find in a choice experiment a mean willingness to pay 64.65 Euros for environmental quality at the beaches in Sardinia. However, Brau and Cao say that this high WTP exists only where losses with respect to original conditions are expected.

The fact that people would prefer aspects of sustainability to be included in the product but are not willing to pay a significant mark-up is a common finding in the literature of sustainable consumption (Priskin, 2009). Vermeir and Verbeke (2006 and 2008) looking at food consumption find evidence for this so-called "attitude – behaviour gap". They even find that a lot of people with a positive attitude towards sustainability do not intend to buy such products.

The absolute values of the MWTP for all levels of all attributes are higher in the experiment for South Africa (see Table 17) compared to the respective value in the experiment for the Maldives. The values are between $ 5.8 and $ 19.0 in the case of the Maldives (see Table 30). The MWTP is again lowest for "CO_2-compensation" and the highest value is observed for environmental management. Although the absolute values of MWTP are higher in the case of South

[22] The prices in the experiment are in Swiss Francs. The exchange rate of 1 CHF = 1.10979 USD from March, 18, 2011 is used to calculated the prices in US dollars.
[23] MyClimate is one of the leading providers of CO2-compensations in Switzerland (see www.myclimate.org).

Africa, the relative values are almost the same since people are willing to pay almost the same relative MWTPs in both experiments. The price of the baseline offer of beach holidays in the Maldives lasting two weeks was $ 3,663, as offered this season by Kuoni, whereas the price of the baseline offer of safari vacations in South Africa was $ 5,430. Therefore, using these base prices, relative MWTP for sustainable aspects are calculated in Table 17 and Table 30 respectively. The only remarkable difference is that the respondents are willing to pay a higher relative premium for environmental management ("a lot of measures") in the case of the Maldives.

The willingness to pay for sustainable tourism products is low compared to the willingness to pay for "green" food. Galarraga et al. (2004) use hedonic pricing to show that the consumers are willing to pay 0.003 Euros more per gramme of coffee due to the inclusion of green characteristics, which is a relative increase of 11.26%. Loureiro et al. (2005) also find that consumers are willing to pay a premium for ecological and fair trade coffee. The found maximal MWTP of $3 per pound of coffee for an organic and fair trade labelled coffee. There are two main reasons for this higher MWTP compared to this survey. First, the above mentioned studies in the food market also state that the market for sustainable food is only a niche market and that this high level of high premiums are only realised in this small niche market, whereas this study considered the whole tourism market and not only the niche market of sustainable tourism. Second, consumers are less willing to behave sustainably during holidays than during their everyday life. They want to forget their daily life, enjoy their holidays without privations and do not want to think about the effect of their behaviour. Becken (2007), applying focus group research, finds that tourists distinguish between their everyday life and their holidays. "The value of freedom to travel is firmly established in the minds of many tourists and limiting travel is considered unacceptable." Weaver (2008) confirms the finding that tourists suspend their sustainable attitudes and behaviour during their holidays. The so called "veneer environmentalists" (Weaver, 2007, cited in Weaver, 2008): sympathise with the idea of sustainable tourism, but are unwilling to take concrete and personal measures. About one half of the consumers in the U.S. belong to this group whereas 1/4 are "non-environmentalists" and 1/4 are "environmentalist" who are willing to make changes.

The low MWTPs in this study indicate that there is not much potential to substantially increase prices due to the inclusion of a specific aspect of sustainable tourism in a product. However, two fixed choice tasks were proposed to all respondents in order to concretely observe if tourists are willing to buy a specific product. In both choice sets, a variant with all attributes on the unsustainable level is compared with a more sustainable product. In the first case, the more sustainable product included CO_2-compensation and the use of local product and building materials, in the second case, the levels of all attributes are set on the most sustainable value. The fully sustainable product is clearly preferred to the basic product. 85% choose the perfect sustainable product compared to the basic product. This indicates that people have a strong preference for a completely perfect sustainable product and that in this case, their price sensitivity might be lower.

5. Conclusions

In the first part of the study, tourists' understanding of sustainable tourism has been investigated with over 6,000 respondents from eight countries. In general, tourists are well informed about the important aspects of sustainable tourism. The main descriptive findings of the first empirical phase on tourists' understanding of sustainable tourism are:

- The overall perception is balanced over the different dimensions. There is no clear prioritisation of a dimension. The share of people agreeing to the statements about sustainable tourism is only for some economic attributes and for the attributes "prolonged stay" and "CO2-compensation" below 50%.
- The attribute "upkeep of a scenic view and the cultural heritage" is assessed as most sustainable. Generally, attributes referring to *local* products, *local* community and *local* culture are judged as most sustainable.
- Tourists rate what they can see, and/or experiences directly at the destination as more sustainable in the ecological dimension.
- For 22 % of the respondents, sustainability is among the top three influencing factors while booking vacations.

Five different types regarding tourists' understanding of sustainable tourism are identified:

- The *balanced type* seriously observes all three dimensions and has above average shares of agreement in all dimensions. 33% of the respondents belong to the balanced type.
- The *sceptic* has a critical attitude and rates all attributes clearly lower. 25% of the respondents belong to the sceptic type.
- The *socio-economic type* rates in particular the social and economic dimension. 12% of the respondents belong to the socio-economic type.
- The *localised type* rates especially the attributes related to local aspects of sustainability and to culture as relevant for sustainable tourism. 15% of the respondents belong to the localised type.
- The *ecological type* considers in particular ecological aspects to be relevant for sustainable tourism. 15% of the respondents belong to the ecological type.

A gap between thinking and acting can be observed in the choice experiment undertaken in Switzerland. Generally, the choice experiment shows that tourists would principally like to buy sustainable tourism products. The respondents consistently favoured the more sustainable levels of the proposed attributes. Although there are clear preferences in favour of sustainable products, it can be shown that the respondents are not willing to pay a substantial premium for the inclusion of specific attributes. The range of the premium for a specific attribute is between $ 5.8 and $ 26.2. These small premiums for the inclusion of a specific aspect of sustainable tourism indicates that from a financial point of view it is not profitable to include only some selected attributes of sustainable tourism in an existing product. There is some evidence that potential customers of sustainable tourism products demand completely sustainable products and they are less price sensitive for such products. This indicates that there is only a potential market for a completely sustainable product. People are only willing to pay substantially more if they know that their vacations are sustainable in all dimensions. Some respondents also reported as a qualitative feedback that they do not understand why they should pay more for a product which is not completely sustainable.

The understanding of sustainable tourism does mostly not influence the behaviour of tourists. There are only some differences regarding the share of tourists who have already booked a sustainable product. More of the balanced type (26%) and the localised type (23%) have already booked a sustainable product. However, not only the past behaviour but especially the potential customers for the future should be considered, i.e. the sustainability aware tourists considering sustainability as important factor when booking a holiday. The distribution of the types among the 22% sustainability aware tourists does not differ largely from the average distribution, since the importance of sustainability during the booking process is ranked in a similar way by all types. Furthermore, it was not possible to identify large differences during the choice experiment. Therefore, no group with a higher preference for sustainable products and/or a higher willingness to pay can be identified. Nevertheless, the above presented types of tourists are important for providers of touristic offers because it helps to understand how to approach potential customers of sustainable products. The different types could be approached as follows:

- A product which should be advertised to the balanced type should be balanced over all dimensions of sustainability.
- The sustainability of a product should be documented clearly and traceably in a product which has the sceptic type among its target groups, because they are sceptical and need information in order to be convinced.
- A product for the ecological type should especially include ecological aspects.
- A product for the localised type enables the enjoyment of an authentic holiday experience, focusing on local and cultural aspects of sustainable tourism. It especially considers local products and the involvement of the local population, and allows for insights into the local community. Finally cultural aspects are emphasised.
- A product for the socio-economic type should in particular include aspects of the social and economic dimension.

This study concludes that sustainable tourism is an interesting market segment with a target group of 22% sustainability aware tourists. These tourists consider sustainability as important when booking a holiday. Typically, these customers are well-educated and have a high income. But there is no large market for products with high premiums because the willingness to pay for attributes of sustainable tourism is low. However, offering sustainable tourism products could be a successful differentiation strategy. The diversification of the existing array of products by developing sustainable products could help to increase the market share of a company relative to its competitors, because the preferences in this study indicate that tourists strongly prefer sustainable products. Hence customers are expected to switch to sustainable offers as long as these products are not substantially more expensive than the non-sustainable or less sustainable products of the competitors.

Although this study offers new insights, there remain still a lot of questions for further research:

- First of all it would be interesting to observe the changes of the share of sustainability aware tourists, of the tourists' understanding of sustainability and of their willingness to pay for it over time.
- Furthermore, 66 % of all respondents have no knowledge of sustainable tourism products. But 55% of those who know a sustainable tourism product have already booked such a product. It would be interesting to analyse whether these tourists who have already booked such a product think differently and behave differently compared to tourists who have not.

- The sustainability aware tourists could not be identified in the choice experiment because in order to keep the questionnaire shorter, the relevant question was not asked. It would be interesting to investigate if sustainability aware tourists have a higher willingness to pay a premium for the proposed attributes describing sustainable products.
- There is some evidence that tourists are less price sensitive when a completely sustainable product is offered. Hence, it would be interesting to make a new choice experiment with products that are either completely sustainable or do not mention sustainability in the description of the product to verify this guess.

6. References

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Appendix A1 Economic and Ecological Attributes

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Appendix A1.1 Definitions of Sustainable Tourism

Following the famous and multitudinously citied definition of sustainable development of the Brundtland Report (World Commission on Environment and Development, 1987) as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", sustainable tourism can be defined as tourism that "meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to the management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems" (Blancas et al., 2010 and WTO[24], 1995 cited in Miller, 2003). The WTO (2010) concretises this definition by stating three requirements for sustainable tourism. Sustainable tourism should:

- "make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
- respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
- ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation."

Considering these two definitions, it becomes apparent that the same high demands are made on sustainable tourism in particular as on sustainable development in general. A very broad range of aspects are addressed: environmental resources, biodiversity, natural heritage, economic progress, distribution of wealth, poverty, employment, social services, socio-cultural authenticity, cultural heritage, tolerance etc. In addition, the interaction of the needs of the tourists and those of the host region must be considered. Furthermore, there is another commonality between sustainability in general and sustainable tourism. Also in the tourism context, development does not necessarily involve growth. In fact, sustainability may call for a stabilisation, increase, reduction, change of quality or even removal of existing products, services, firms or industries (Liu and Jones 1996, cited in Liu 2003).

In the following, we provide a short discussion of the most important economic and ecological attributes of sustainable development and of sustainable tourism in particular. These arguments were the basis for constructing a questionnaire in order to identify the crucial attributes of sustainable tourism from a tourist's perspective.

[24] WTO is in this text the abbreviation for the World Tourism Organisation of the United Nations (www.unwto.org) and should not be confused with the World Trade Organisation (www.wto.org).

Appendix A1.2 Economic Attributes

Appendix A1.2.1 Main objective

From an economic point of view, non-decreasing economic well-being (i.e. the increase or at least the preservation of economic well-being) is a superior objective, if not the dominant objective. Non-decreasing well-being means that today's level of economic wealth should increase or at least stay constant over time (intertemporal equity). Other objectives, which can be sustainability criteria by themselves, are – at least from the economic point of view – of secondary importance. For example, guest satisfaction, a well-balanced guest and demand structure or diversity of supplied services are in this context measures more for reaching the main objective than objectives by themselves.[25] Nevertheless, they are addressed in this section because they are important indicators for controlling the achievement of the main goal.

However, it should be noted that sustainability and sustainable tourism in the economic dimension does not mean that future economic opportunities in the tourism sector should not be missed. Since the particular source of economic well-being is not decisive, sustainability only requires that future economic opportunities in general are not damaged.

The following section Appendix A1.2.2 on the economic attributes is structured as follows. First, different measurement approaches for the main goal, i.e. non-decreasing economic well-being, are briefly discussed. Then, the problems of leakage of tourism revenue and of poverty alleviation through tourism are addressed. Finally, the aspects of the demand and supply structure and of employment are dealt with.

Appendix A1.2.2 Measurement of economic well-being

Concerning the measurement of economic well-being, three different perspectives can be identified, all of them having their own caveat. From a general perspective, economic well-being and in particular its development is normally measured by the concept of value added. The measurement of value added is the standard measurement of the economic well-being or the economic performance of a geographic parameter (e.g. country, region or destination).[26] However, the smaller the geographic perimeter under consideration, the more difficult the assessment of the relevant value added becomes.

From the perspectives of households, or more precisely of the local population, economic well-being is best measured by per capita income or by their employment situation as a main income source. Especially when considering the aspect of leakage, i.e. the outflow of locally generated value added into other regions or countries (see below), the income approach seems to be preferable. Compared to the above mentioned concept of value added, the income approach is more able to focus on the well-being which is beneficial to the residents.[27]

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[25] Apart from such economic criteria, social and ecological sustainability criteria can also contribute to the achievement of non-decreasing economic well-being; e.g. nature protection, the preservation of the townscape or the cultural heritage. However, these criteria should not be regarded as being of secondary importance. Since the three main dimension of sustainability (economy, ecology, society) have equal status.

[26] In this context, one has to distinguish further between direct effects (i.e. in this case, value added within the tourism sector), indirect effects (i.e. value added in other sectors due to intermediate inputs) and induced effects (i.e. value added in all sectors due to income and investment effects).

[27] Alternatively, the value added approach could be adjusted in the sense that its scope is not according to location, but according to ownership (the distinction between gross domestic product and gross national product).

Finally, from the perspective of firms, economic well-being should be measured by the firms' profits. However, especially in the tourism context, this perspective might be misleading, since touristic assets are often owned by non-residents.

Appendix A1.2.3 Leakage of tourism revenue

The leakage of tourism revenue to other regions or countries is an important issue in the context of sustainable tourism. Revenue leakage may compromise the economic development of a host region and/or of the local population. If a large part of the generated income (value added) benefits non-residents, the main economic sustainability criteria, i.e. the strengthening of economic well-being, is at risk.

Revenue leakage can be defined as the failure of tourist spending to remain in the destination economy (Sandbrook, 2010); e.g. caused by foreign ownership of hotels and other touristic infrastructure or because of the tourists' demand for non-local, high-quality products as e.g. Kodak film, specialist food or Guinness beer (Budaneau, 2005). The only benefit left over for the local community is in low-paid, lower skilled employment (SNV, 2009). The level of leakage can also be seen as a reflection of the local capacity and ability to supply the goods and services demanded (Sandbrook, 2010). In addition, evidence was found that high leakage is often associated with mass tourism (Hampton, 1998 cited in Sandbrook, 2010) and with high-end, luxury tourism (Scheyvens, 2002 cited in Sandbrook, 2010).

Obviously, the problem of leakage is higher and more relevant for smaller geographic perimeters such as a village or a city than for major regions or countries. Within a smaller region, the production possibilities are limited. In this sense, relatively high leakage rates are not a major problem, since they are (economically) justifiable and mostly the result of geographic scale. However, Sandbrook (2010) argues that especially in poor, rural areas of developing countries, the necessary capacity and ability is lacking. Here, leakage is not an issue of scale, but the result of the economic and social structure of these regions or countries.

Despite the conceptual problems of estimating the amount of leakage (see Sandbrook, 2010), the leakage rate can be substantial. For example in the case of developing countries, an estimated 55 per cent of tourism revenue leaks back to the developed world (Boo, 1990). Similarly, the WTO estimates for small island countries that 50-70% of the gross tourism receipts leaks out of the destination country through imports (Budaneau, 2005). For smaller geographical units, leakage rates can be much higher. As Walpole and Goodwin (2000, cited in Sandbrook, 2010) argue, "just one per cent of tourist spending at the destination was found to reach local people living within Komodo National Park in Indonesia."

Despite the sometimes substantial leakage rates, tourism can still be the most important sector of an economy. For example, Sandbrook (2010) finds that for rural Uganda - despite a leakage of 75% per cent – the retained revenue from tourism was much larger than all other revenue from other sources combined. Thus, tourism contributes in most cases to the objective of economic development or economic opportunities. To strengthen the role of tourism with regard to a sustained economic development, the linkages between tourism and other sectors of an economy are important. Cernat and Gourdon (2005) argue that: "One of the best ways to enhance economic benefits is to integrate tourism into the national economy by establishing strong linkages between tourism and other economic sector […]. If the tourism sector makes use of products and services produced within the economy the tourism will strengthen those sectors and provide additional income."

Similarly, Hitchcock et al. (1993) argue that "a greater level of local involvement in the planning and development of tourism is an essential prerequisite of sustainable tourism." These arguments can easily be transferred from the national to the regional context.

In regional economics, the term "extension of the regional value-added chain" is used to describe the intensification of the integration of a specific sector, e.g. tourism, into the other sectors of the economy. Extension of the regional value-added chain means that local suppliers of intermediate products or services are favoured over non-local suppliers. For example, a restaurant should use predominantly locally cultivated food from producers who use locally produced intermediate goods (e.g. fertilizer) and employ locals. Or a main contractor should prefer local building firms that use e.g. local timber to non-local firm or firms that use timber from other regions or countries. If the required intermediate goods or services are not yet locally supplied, establishing a local supply must be considered wherever applicable. In such a way, tourism can contribute to reduce revenue leakage and thereby to strengthen the economic development.[28]

Appendix A1.2.4 Poverty alleviation and distributional aspects

The leakage of tourism revenue to other regions or countries is an important issue in the context of sustainable tourism. Revenue leakage may compromise the economic development of a host region and/or of the local population. If a large part of the generated income (value added) benefits non-residents, the main economic sustainability criteria, i.e. the strengthening of economic well-being, is at risk.

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Appendix A1.2.5 Demand and supply structure

At the beginning of this section we argued that non-decreasing economic well-being is a superior sustainability criterion – at least from the economic perspective – and that other possible criteria are in this context more measures to reach this main objective than sustainability criteria by themselves. Nevertheless, a closer look at such criteria is worthwhile, since they contribute to the achievement of sustainable tourism. Thus, in the following section, we briefly describe some such criteria, namely diversity of supply and demand, seasonality, guest satisfaction and repeat visitors. The common theme of these criteria is that all of them are related to the structure of supply or of demand.

Diverse structure of demand
In general, one can argue that the more diverse the structure of demand in the tourism industry, the smaller the risk of abruptly losing too large a share of the income (or value added) generat-

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ed by tourism. Especially when considering the long term, diversity with the tourism industry is crucial, since diversity increases resistance to crises (Baumgartner, 2008). A more diverse tourism industry attracts different target groups, which can be distinguished by – to name a few – the touristic activity demanded, the desired level of comfort, the regional origin, the duration of stay, age or by the percentage of regular guests. It seems rather unlikely that all target groups are affected by a collapse in demand at the same time and/or by the same amount.

Seasonality
Few tourist destinations have a constant demand over the year. If demand fluctuates greatly, it is difficult and costly to finance and maintain the infrastructure that is needed for the peak periods. In addition, seasonality has negative effects on the employment situation, since the majority of the jobs are only offered during (high) seasons. Unstable employment is not attractive for the local population and leads to a high percentage of migrant workers and, thereby, a higher level of revenue leakage.

Thus a lot of destinations and regions try to find new opportunities to increase demand during their particular low seasons. For example, the Swiss Tourism Organisation has recently presented a study called "Re-invent summer" with the goal of finding new ideas to boost the summer season in Switzerland.

Guest satisfaction and repeat visitors
Baumgartner (2008) and WTO (2004) argue that guest satisfaction is an important factor with regard to long-term economic perspectives of a region or destination and a leading indicator for sustainable tourism. Satisfied guests come back and do word-of-mouth advertising. This leads to a higher average infrastructure utilisation and at the same time leads to reduced advertising costs. However, sustainability does not increase linearly with a higher guest satisfaction or return frequency rate (the latter as a possible measure for guest satisfaction). Rather, it is an inverted U-shape relation, since the resistance against crises decreases with an increasing amount of regular guests (Baumgartner 2008, figure 50). The WTO (2004) lists a number of factors influencing guest satisfaction, e.g. meeting tourists' expectations, providing a sense of good value for money, ensuring a clean, safe and secure environment, hospitality, quality of sites, events, attractions and services related to them, expectations and interests. However, many individual responses depend on personal interests and individual perceptions and are not objectively measurable indicators: e.g. did the birdwatcher see the birds they wanted to, did the skier have good, and in particular his preferred, snow conditions, was the local festival interesting to the visitor, was the food to the taste of the tourist?

In addition, it must be noted that positive short-term effects can have negative impacts in the long run (Baumgartner 2008, Bieger and Frey, 1999). For example, a major touristic event or greatly disruptive touristic activities – both of them generating considerable income in the short run – can disseminate negative images or lead to the crowding out of regular guests. Thus, the overall effect of such activities may be rather complex and ambiguous.

Diversity of supplied services
This argument is closely linked to the above discussed aspects of a diverse structure of demand and guest satisfaction, since they aid one another. Blancas et al. (2010) evaluate diverse, high-quality tourist facilities (and its maintenance and long-term improvement), as a very important factor for sustainable tourism. First, this reduces the risk of being dependent on a specific market segment on the demand side, whereby the dependence on specific preferences of the tourists is reduced. Second, if one specific attraction has to be withdrawn in the short or in the

long-run (i.e. no snow during a winter season), the touristic demand is only partially affected. In addition, a large diversity of supplied services induces tourists to stay longer in order to experience more. Moreover, tourists who experience a lot of different services and attractions during their stay are generally more satisfied (WTO, 2004).

Appendix A1.2.6 Employment

Economic well-being is strongly connected to the employment situation, at least for the perspective of the local population. From a general perspective, it does not matter in which sector. Tourism can directly provide (new) jobs in the tourism sector or – due to a highly developed value added chain – in other sectors as well. With regard to sustainable tourism, the employment of locals compared to non-locals in directly or indirectly tourism related activities and the corresponding wage equities are of relevance and are widely accepted indicators (Miller, 2001).

However, sustainability does not increase linearly with the employment of locals in the tourism sector, since an increasing dependence on tourism negatively affects the resistance to crises (Baumgartner 2008). In addition, a multiplicity of jobs in the tourism sector is unstable, because they are only needed during peak season (seasonality argument), and are relatively low-paid. On the other hand, the assessment of the employment situation due to tourism crucially depends on alternative options. In a poor developing country, a job in the tourism sector, even if unstable and low-paid, may improve the economic well-being drastically, whereas a similar job in a developed country is rather unattractive.

Appendix A1.2.7 Conclusions concerning economic sustainability attributes

From a strictly economic point of view, the achievement of non-decreasing economic wellbeing is sufficient, independent of its source. Thus, all measures that contribute to this superior goal can be regarded as sustainable. However, from a more pragmatic point of view, and with respect to the interaction of economic, ecological and social aspects, additional sustainability criteria should be taken into consideration. Among others, guest satisfaction, seasonally balanced demand, diversity of supply, and employment creation are important aspects with relation to sustainable development, and sustainable tourism.

In the context of developing countries, special attention should be paid to the aspect of leakage and especially to poverty alleviation. Tourism should – as other sectors as well – contribute to the improvement of the economic situation of less privileged people.

Therefore, we propose the following economic attributes for the empirical investigation:

- Sustainable tourism contributes to the preservation of long-term regional economic well-being.
- Sustainable tourism contributes to the maintenance of regional employment and the development of new jobs within the region, which also offer adequate wages.
- Sustainable tourism offers a large variety of different and independent products.
- Sustainable tourism has a versatile and flexible infrastructure.
- Sustainable tourism contributes to poverty alleviation within the destination.
- Sustainable tourism enhances a more equal income distribution within the local community.
- Sustainable tourism uses local products and services while paying an adequate and fair price for these products and services.
- Sustainable tourism is characterised by a high share of repeat visitors.
  Or alternatively: Sustainable tourism is characterised by a high level of guest satisfaction.
- Sustainable tourism is characterised by seasonally non-fluctuating demand.
  Or alternatively: Sustainable tourism is characterised by constant high capacity utilisation over the whole year.

Appendix A1.3 Ecological Attributes

The core (economic) value of most destinations is the environment. Unfortunately, the environment is often degraded due to tourism. In beach holiday destinations with the primary attraction of nice beaches and landscape, often too many hotels are built. As a result, the nice beach and the village with a lovely view out of the hotel rooms do not exist anymore. This has happened to a lot of destinations in the Mediterranean area in Southern Spain and in the Balearics (Pintassilgo and Silva, 2007). Large losses of economic surpluses due to the overdeveloped coastline were measured by Cushman (2004), because the overdeveloped coastline has led to a decrease in touristic demand in Southern Thailand. In the worst case, tourism destroys tourism because the main attraction, i.e. nature is destroyed, and tourism collapses completely. A good example is the cave in Lascaux, France. The cave is an UNESCO world heritage site with prehistoric petroglyphs. The cave had to be closed in 1963 because of fungal decay of the petroglyphs which was caused by the increasing humidity in the caves due to the ever increasing number of visitors in the cave. Today, only a replica of the cave (Lascaux II) can be visited.

Thus, the overall objective of ecological sustainability is the protection and/or even the improvement of the ecological situation in a region or destination. Thereby, the basis for tourism with its desired economic effects (see above) is also enhanced (Baumgartner 2008).

As in the general sustainability debate, there also exist weak and strong versions of the sustainability context in the context of sustainable tourism. Hunter (2002) calls them light green and dark green variants of sustainable tourism. "Weaker interpretations of sustainable tourism focus on the importance of continued economic growth in the tourism sector and the maintenance of sufficient environmental quality at the destination area to ensure the continued survival of existing tourism products and the development of new products at existing and new locations. This highly product-focused view often leads to relatively little attention being paid to natural resource demands, with the environmental side-effects of growth only tackled retrospectively if possible and/or economically viable". On the other hand, "advocates of darker green, or stronger, interpretations of sustainable typically espouse the importance of the precautionary principle, the need for proactive or anticipatory tourism development planning, and the systematic

monitoring of changes to the natural environment/capital stock of natural resources. Broadly speaking, the emphasis is on the protection of the local natural resources that support tourism, rather than on the promotion of tourism-related economic growth for its own sake". To sum up, light green sustainable tourism uprates the economic development to the preservation of a pristine natural environment. Environmental protection is good as long as it supports both tourism and economic development. Strictly speaking, this light green version of ecological sustainability resembles the economic perspective of sustainability. In contrast, the dark green version uprates ecological aspects to economic ones. Tourism is tolerated as long as it does not harm the environment.

According to Hunter (2002) it does not suffice to look at the services and goods consumed or provided within a region or a destination. Rather, one has to consider the whole process, i.e. the source area, the transit area and the destination area. Goods and services in the source area include, for example, the purchases made for the holiday or the transport to the airport; in the transit area e.g. the outbound and return travel; and finally in the destination area e.g. travel within region, consumption, water and energy use, waste management.

In the context of weak and strong versions of sustainability, the question arises whether absolute targets for ecological criteria are reasonable, e.g. maximal energy consumption per day and tourist, independent on e.g. the geographic and climatic conditions. In the context of strong sustainability, absolute criteria can be necessary and justified. However, from a more pragmatic point of view, absolute criteria can be quite problematic and prohibitive, since the resource use not only depends on the type of holiday, but also on the geographic and climatic circumstances. Energy consumption restrictions could lead to the impossibility of long distance travel, e.g. from Europe to Australia or New Zealand.

In the following section, we will look more closely at a sample of ecological attributes, namely traffic, energy use, land use, energy use, waste management and biodiversity. This selection does not constitute an exhaustive list, but deals with the most important aspects of ecological sustainability. Although climate change and the related emission of greenhouse gases is one of the most relevant ecological issues related to sustainable tourism, CO_2 emissions are not addressed separately, because CO_2 emissions directly correlated to other aspects considered, e.g. traffic or energy use. For the same reason, we do not discuss the use of environmentally friendly products.

Appendix A1.3.1 Traffic

By looking at the mobility development in the past years and decades, one observes a substantial increase in most countries (e.g. for Switzerland see Bundesamt für Statistik 2009). In addition, there is no evidence suggesting a trend reversal. In industrialised countries, holiday and leisure traffic is predominant; e.g. in Switzerland it accounts for 45% (Bundesamt für Statistik, 2009), in Austria for 41% and 92% on weekdays and weekends respectively (Verkehrsclub Österreich, 1998). Mobility or traffic is directly linked to ecological aspects since – independent of the journey type – in tourism most energy is used for transport purposes. The following figures clearly illustrate the great importance of the issue of transport for sustainable tourism. Up to 90% of energy consumption in tourism is used for the outward and return journey (Müller 1995, cited in Baumgartner 2008). 60 to 95 % of the environmental impact of leisure-tourism is due to transport (Goessling et al. 2005). Up to 40% of CO_2 emissions in tourism is caused by air transport, 35% by other traffic modes and 21% by accommodation; the share of other activities is only 4% (Ehmer and Heymann, 2008).

Traffic causes a number of problems: e.g. greenhouse gas and air pollutant emissions, intensified consumption of land, energy use, noise pollution or deterioration in the quality of landscapes (WTO, 2004). Regarding CO_2-emissions, transport is the main factor in tourism which causes CO_2 emissions, accounting for 75%. Regarding air pollution, "air pollution is also considered a major contributor to degradation of cultural heritage (the effects of acid rain on limestone monuments) and natural heritage (harming species and altering ecosystems") (WTO, 2004).

On the other hand, it is an important success factor for a region or destination that tourists can travel easily to and from the region or destination as well as within the region or destination (WTO, 2004). In principle, the same argument holds for the carriage of goods. The access of tourists and goods to regions and destinations that are badly connected to the transportation infrastructure is time-consuming and costly. Since time and money are both scarce resources, the accessibility factor is vitally important for the economic success of a destination, but conflicts with ecological targets.

Thus, from an ecological point of view, sustainable tourism must take care of the transport issue. To solve this regarding transport to and from destinations, it is vital for a region or destination to be accessible by public transport. To solve the mobility issue within the destination, a destination can provide a good public transport systems – which could be free as in a lot of Swiss ski resorts – and engage in local traffic management.

By addressing the issue of transport, it is likely that not only the environment itself profits from less or cleaner traffic, but there are also positive side-effects. For example, less noise or a car-free village centre increases the degree of guest satisfaction; as discussed above, a high level of guest satisfaction is good for the economic development of a region or destination.

Appendix A1.3.2 Energy use

Energy use is one of the most important ecological criteria for sustainability. In the end, most ecological indicators are somehow linked to energy use and energy sourcing. In addition, energy use is a strong indicator of pollutant emissions. Thus, reducing energy use and using energy more efficiently has a lot of benefits.

However, as mentioned above, 90% of energy consumption is used for transport purposes so the corresponding arguments also apply in this context. Concerning accommodation, it is noteworthy that in industrialised countries, energy consumption is comparable or even lower than the energy use of the local population, since tourists normally stay in bigger and more energy efficient buildings and use only one room (Baumgartner 2008). However, this does not hold for tourism in developing countries. No general assessment is possible concerning energy consumption linked to touristic activities, since energy consumption greatly depends on the kind of touristic activities. Some of them are energy saving like hiking, others like skiing, ice skating or motor sport are extremely energy intensive.

Apart from the question of energy use, the source of the energy is also relevant. Today, non-renewable energy sources such as oil, coal, natural gas and nuclear energy prevail by accounting for approximately 81% of global final energy consumption. Renewable energy sources only account for 19% of global final energy consumption (traditional biomass 13%, hydropower 3.2%, others 2.6%); however, this trend is increasing (REN21, 2010). This trend is driven by continuing concerns about climate change and energy security (such as peak oil, high oil pric-

es) and governmental incentives and regulations (United Nations Environment Programme, 2007). Renewable energy sources are typically less emission intensive and thus more environmental friendly. However, renewable energy sources also have negative impacts on the environment. For example, both hydropower using dammed lakes and wind turbines potentially disfigure the environment.

Appendix A1.3.3 Land use

Land use is a ubiquitous concern, not only in tourism but everywhere. From an ecological point of view, an economic and considerate exploitation of land is important. In the context of tourism, land use has especially to be addressed for outdoor activities and where erosion is substantial.

According to Baumgartner (2008), one has to distinguish between land use for accommodation, for transport infrastructure and for touristic activities. Land use for accommodation varies quite a lot, but is especially high for secondary residences. The land use required by traffic infrastructure crucially depends on the building density. In this regard, a high percentage of relatively remote buildings in the surrounding area of a destination is very negative. Concerning land use for touristic activities, one has to distinguish first between intensive land-use activities and activities without considerable land use. The latter are unproblematic. For the land-intensive activities, one has to distinguish further between activities where the stress placed upon the land is moderate (e.g. hiking, cycling, cross-country skiing) and activities where the stress placed upon the land is severe (e.g. skiing, golf, motor sport). Whereas the former is again unproblematic, the latter endangers the sustainability of a touristic attraction.

Erosion
Erosion – being in principle a natural process – has increased dramatically through human land use, especially industrial agriculture, deforestation and urban sprawl. Land used by human activities erodes more than land under natural vegetation (Montgomery, 2008). Erosion of land can have drastic effects on tourism and thereby on the economy as a whole. For example, sea-level rise (inter alia due to climate change) leads to the erosion of sandy beaches in Hawaii (Focus Online, 2009). Estimations based on visitor surveys assume that the erosion of the Waikiki Beach in Hawaii "could cost the tourism industry nearly $2 billion annually in lost visitor spending, trigger more than 6,000 job losses and shrink state tax revenues by about $125 million a year" (eTN online, 2008). Similarly, the intensive use of water for touristic activities and agriculture and the increasing deforestation (for building areas) lead – together with global climate change – to an increase of desertification in Spain; already one third of the country is affected (Streck, 2005). However, erosion is not only relevant for exposed regions like coastal areas or regions that are affected by heat and drought. Rather, the presence of human activities leads to an increased threat of erosion in almost all regions of the world.

Appendix A1.3.4 Water use

Water is a very important, even vital input factor, for tourism. Almost all touristic goods and services are dependent on water, e.g. hotel services like accommodation and food, golf courts, swimming pools, artificial snow production, etc. The estimates regarding water use of tourists compared to the local population are ambiguous. WTO (2004) reports that water use by tourists is typically double or triple that of the local population of the destinations. Briassoulis (2002) states that water use by tourists is six to ten times higher than that of locals, creating problems in water-deficient regions like the Mediterranean, the Caribbean or South America.

However, if water use – apart from the corresponding energy use – is a relevant or important sustainability criterion critically depends upon the region or destination under consideration. In the Alpine regions, water is normally not really a scarce resource. For example, artificial snow machines are typically not problematic because of their water use, but because they are energy intensive and use chemical by-products. In contrast, in Southern European or African regions for example, water is typically a scarce resource. Intensive water use for touristic activities like golf greens is then in direct competition with local households and agriculture (Baumgartner 2008).

As Goessling (2001) states for the east coast region of Tanzania, the competition for water often goes along with an overexploitation leading to a lowering of the groundwater table, land subsidence, deteriorating groundwater quality and saltwater intrusion. "These, in turn, determine the living conditions in coastal areas and the effects will be felt both by the local populations and the tourist industry." The local population, especially farmers, will suffer from decreased water supply or higher prices for water. Therefore agriculture becomes less profitable and some farmers have to give up their jobs.

Thus, we are once again back in the situation that an overuse or misuse of an environmental asset not only has ecological but also economic (and social) consequences. However, UNESCO (2006) argues that e.g. the driving out of locals out from agriculture is not necessarily a problem from a sustainability point of view if farmers find new jobs in tourism which allow them to at least maintain their standard of living

In this section, we have only dealt with the question of water use and not with aspects of the quality of water (drinking water, sea water, ground water etc.). Undoubtedly, quality aspects are also relevant for ecological sustainability. However, we will deal with these quality aspects in the subsection about waste management below.

Appendix A1.3.5 Waste management

Professional waste management is not only crucial from an ecological point of view, but also from an economic point of view. Irresponsible waste management (e.g. unprotected landfill) can lead – at least in the long run – to severe damage to the environment, reduced biodiversity, health risks for the local population and tourists (fresh water quality), a deterioration of touristic environmental assets, and finally to an economic downturn. Again, not only ecological sustainability criteria are affected, but also economic criteria. The following example illustrates this relationship.

Sea water quality is a significant factor in the destination choice for tourism in coastal areas (WTO, 2004). A high quality should be sustained and sewage should not be lead into the sea (installation of sewage treatment plants) in order to prevent the contamination of important tourism resources (beaches, lakes and rivers). The pollution can be caused by tourism itself, local communities and industry. "In extreme cases, contamination has resulted in virtual closure of resorts; e.g., breakdown of sewage infrastructure was a key contributor to the closure of several Iberian beach hotels in the 1970s and the abandonment of Black Sea resorts in the 1990s" (WTO, 2004).

As we will argue in the next section, biodiversity is an important aspect, from both an ecological as well as from an economic perspective. However, "increased concentrations of suspended solids in coastal waters, rivers and lakes resulting from human activity" – such as tourism – causes sometimes significant changes in habitats and, thereby, reduces biodiversity (UNESCO, 2006).

Appendix A1.3.6 Biodiversity

Biodiversity can be defined as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (Convention on Biological Diversity 2002). In the context of tourism, it is important to note that not only animals with touristic potential have to be saved, but also all other organisms because they help to maintain the balance of the ecosystem in and to ensure the survival of the other animals.

In an empirical study using data for Ireland, Macagno et al. (2009) find evidence that the duration of a tourist stay is positively dependent on an indicator for biodiversity. Moreover, they estimate that a biodiversity loss of 10% would lead to an annual deadweight loss of around 5 million Euros in the tourism sector.

Fragile ecosystems and rare flora and fauna can be protected by establishing preservation areas. For example, the Swiss National Park is a strictly protected wilderness where flora and fauna can develop freely and natural processes are allowed to run their course unhindered (SNP, 2010). Any form of cultivation is prohibited and tourists are only allowed to access the park on marked paths, which cover only a relatively small part of the whole area. Despite these restrictions, the Swiss National Park is an economically valuable touristic asset for the adjacent regions.

To sum up, biodiversity is an important aspect for all forms of nature based tourism, because only a functioning ecosystem can guarantee a constant tourist flow, and biodiversity is a critical component of the natural environment. Moreover, the motivation of tourists visiting nature parks is to observe a large variety of animals. Therefore it is essential to maintain this diversity.

Appendix A1.3.7 Conclusions concerning ecological sustainability attributes

In principle, there is a multiplicity of ecological sustainability criteria, since the natural environment constitutes a very broad and complex system. Thus, one has to make a selection of criteria that cover the most important criteria. However, it is not possible or reasonable to rank the different criteria. All of them deal with important ecological aspects and, thus, have their own conditions.

The criterion of biodiversity looks at the preservation of the system as a whole. A second group of criteria, namely energy, water and land use, deal with the use of natural resources. Waste management refers to the handling of waste or emissions. In the context of tourism, transport should also be looked at, since outbound and return travel as well as trips during the holiday are responsible for the largest part of total energy consumption and lead to substantial (air pollutant) emissions. CO_2 emissions have not been addressed separately, since they strongly correlate to energy use and particularly energy sourcing.

In addition to the importance of all these aspects with respect to the ecological value, most of them are also important from an economic point of view. A damage, loss or overuse of natural resources or assets most probably has negative effects on the attractiveness of a region as a holiday destination and, thereby, on the economic performance of the region under consideration. Thus, an ecological sustainable development is of double value.

Therefore, we propose the following ecological attributes for the empirical investigations:

- Sustainable tourism is characterised by a good provision of public transport to and from, and at the destination.
- Sustainable tourism compensates for the CO_2 emissions caused by the outbound and return journey through the support of climate protection projects which help to reduce CO_2 emissions.
- Sustainable tourism encourages people travelling from far away to stay longer at the given destination.
- Sustainable tourism is characterised by the use of renewable energy sources.
- Sustainable tourism minimises waste output and ensures appropriate waste management and sanitation.
- Sustainable tourism recycles waste and prefers the use of products made of recycled materials.
- Sustainable tourists do not use significantly more water than the average of the local population.
- Sustainable tourism places an importance on the upkeep of the scenic outlook of a place.
- Sustainable tourism takes the preservation of biodiversity into account.

There are some more important ecological attributes related to buildings and infrastructure. These attributes were not considered by our team because it was the task of the architecture and engineering department team to propose such attributes.

Appendix A2 Architectural Attributes

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Appendix A2.1 Sustainability and Tourism

These days everybody talks about climate change and the scarcity of resources. Consequently the discussion about sustainability is also a central issue for tourism as an important economic factor. Sustainable architecture is grounded on social, economic and ecological criteria and is a basic condition for the development of sustainable tourism. What follows is a discussion of the most relevant aspects of architectural sustainability and environmental compatibility, i.e. saving resources, energy-efficient processes, durability and flexibility, adequacy and comfort, and finally, architectural quality.[30]
One of the most important criteria of architectural sustainability shall be introduced immediately: the compactness of buildings and thus the issue of their closeness. The concepts that are relevant for tourism are the landuse and sprawling communities: in Switzerland the construction of secondary residences in the alpine tourist resorts, which have large surface areas,, is a constant subject of debate.[31] The compactness of buildings is not only of interest regarding the necessary protection of the finite resources of land, water and landscape, but has also a huge influence on the amount of energy necessary for the erection and the management of buildings.

Appendix A2.2 Saving Resources

A building is a complex system whose components are in relation to each other. As such, an assessment of the sustainability of buildings has to come through a holistic approach which considers the whole life cycle of a building, from the construction to its operation and dismantling (Künzler, 2001).
As early as the first design phases, one has to consider not only the possible reduction of the operational energy but also how to save resources. This calls for the careful selection of materials, which should have the least possible impact on the environment, in their fabrication, transportation, handling and salvage potential (SIA 112/1, 2004). For the environmental impact, different criteria play a role, such as the emission of toxic gases or greenhouse gases in the life cycle of the building, or the recyclability of a particular material. Of particular importance is the consumption of non-renewable, fossil energy in any product or service. This aspect is considered by the *Energieleitbild Bau* of 2009, by the Swiss Association of Engineers and Architects (SIA), which calls for "an intelligent handling of the resource energy", in order to bring "the Swiss buildings consequently on a sustainable base" (Preisig et al., 2010). Accordingly, the SIA documentation *Effizienzpfad Energie* contains "target values and measures, that allow the construction of buildings today which conform to the 2000-Watt Society" (SIA D 0216, 2007)[32] and establishes the target value energy in relation to mobility and to the embodied energy necessary to construct buildings.[33]

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[30] To compare with the SIA 112/1 commendation about sustainable design, edited by the Swiss Association of Engineers and Architects (SIA) in 2004: general aims and criteria are defined for a sustainable architecture, allocated to the three domains of sustainability: environment, economy and society.

[31] Cf. target agreements ibid.

[32] For the aims of the 2000-Watt Society compare „Novatlantis" 2010, p. 6 et seq.: The worldwide average continuous energy consumption per capita is 2000 watts - showing enormous discrepancies between developing countries (500 watts), western industrial nations (6500 watts) and the USA (12000 watts). The 2000-Watt-Society asserts that the high standard of living enjoyed by the western world can be made available permanently for all people worldwide if energy consumption is reduced to 17500 kilowatt hours per annum, (equivalent to 2000 watts) per capita, and if the CO2 emissions do not exceed 1,0

Embodied Energy

Embodied energy[34] provides an easily measurable and significant indicator of the environmental compatibility of materials and thus of construction materials, construction systems and entire buildings.[35] It is the sum of the non-renewable primary energy, which is needed for the fabrication and disposal of a material, for which the requirements for the fabrication and disposal are calculated separately. Meanwhile standard calculation systems exist which are capable of estimating the embodied energy "out of the life cycle inventory for all the processes that come before or after the use of building materials, from raw material dismantling, to transportation-, construction- and transformation-costs, as well as disposal including all the necessary auxiliary means" (SIA 2032, 2010).

Bricks, for example, are produced by the mechanical dismantling of clay, which is formed into bricks, and thus use energy. These clay bricks are then fired, cooled down, stacked on pallet and packed for transportation. The truck that transports the bricks into the storage facility or onto the construction site, consumes diesel fuel, tires and other material. Both the preparation of the fuel and the production of the truck and the tires, as well as the construction of the bricks need energy that has to be included in the equation.[36]

On the one hand, embodied energy directly evaluates all fossil fuels with the energy value of its consumption (heat value), as well as limited available primary energy forms (natural uranium and hydraulic power).[37] On the other hand, the impact of greenhouse gases and all other air pollutants emitted by the use of the energy are included.[38] As this is an input-indicator, embodied energy is not significant for pollution that results from disposal by burning or dumping. Furthermore it is not suitable for evaluating specific pollutant emissions. For example, to evaluate the environmental pollution resulting from the copper eluviation into ground water from metal roofs, additional risk analyses through emission oriented indicators are necessary. In some cases, a low-energy but high pollutant emission method of building is preferable to building with a lower pollution but higher energy consumption.[39]

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tonne per person per year. According to this, the Swiss Energy Reduction Path calls for cutting the demand for fossil fuels in half by attempting to reach the target of 2000 watts in 2150.

[33] The current SIA documentation „Effizienzpfad Energie" considers the climate-relevant greenhouse gas emissions as an additional target value (Cf. SIA 2040, 2010).

[34] Cf. Kasser 2004: Originally 'embodied energy' was used analogously to 'embodied greenhouse gas emissions' for the indirect energy consumption of a country that is caused by importing goods from abroad. This energy is not included in the national energy statistics, which only cover domestically produced energy and imported fossil energy sources in order to avoid duplications and gaps in the United Nations' worldwide statistics. For a detailed list of the corresponding indirect greenhouse gas emissions consider „Graue Treibhausgas-Emissionen der Schweiz 1990-2004" (Jungbluth, Steiner, Frischknecht 2007).

[35] The evaluation tool SNARC (by SIA) uses for instance the indicator 'embodied energy' for an efficient estimated assessment of the sustainability of competition projects. SNARC is based on knowledge generated by analysing existing buildings (SIA D 0200, 2010).

[36] Cf. Kasser 1998 and Kasser 2004: As with all material and energy balances, when calculating embodied energies, system boundaries are crucial factors for their significance. In general, building materials and the required production means can be traced back to the raw material reserves. As the system is expandable in terms of time and location, system boundaries are to be drawn on a case-by-case basis.

[37] Cf. Kasser, 1998: The criteria for the boundaries of embodied energy are renewability, availability and the environmental impacts of raw material extraction and of their energy use. Thus renewable and readily available raw materials are not included.

[38] Ibidem

[39] Cf. Kasser 2004: A general disadvantage of emission based indicators is that they are afflicted with considerable uncertainties that are owed to the complexity of the 'system environment'. The energy consumption of a system can be determined with much more reliability.

Local Conditions
Embodied energy is expressed as a unit of energy (MJ or kWh) that is referenced to a product specific unit (pc, kg, m3 etc). It is dependent on the time and the place of preparation of a product or a service: It thus makes a big difference if a kilogram of tomatoes is consumed directly on a field in Italy at harvest time, for which 1.1 MJ energy is needed, or for example if the tomatoes are planted in an heated but not insulated greenhouse and transported from Ticino to Zürich, in which case the energy needed is almost 40 times higher (37.5 MJ/kg).[40]
Consequently, building materials in should not be separated from regional conditions. An important criterion for sustainability is thus the utilization of available primary commodities and a high contingent of secondary commodities (recycled materials) (SIA 112/1, 2004). Thanks to the large capacity of transportation methods, which are used to full capacity, transportation mostly accounts for only 10% of the embodied energy of building materials. In the case of materials that contain a low amount of process-energy, such as derived timber products from overseas, the transportation energy can still greatly exceed the process energy (Kasser, 1998).

Compactness
Different model calculations[41] about the factors that influence the consumption of embodied energy in buildings have shown that the most important factor is the often-underestimated compactness of a building, i.e. its form and size. The reason is that in all buildings, more than 50% of the primary energy resides in the building envelope and in the basement. The bigger the relation between surface and volume, the larger is the embodied energy per square metre floor surface. Using a compact, cube shaped building compared to an elongated building with a complex form, up to a quarter of the embodied energy can be saved (Kasser, 2004). A different material choice for the envelope of the same building exerts less influence. The tendency nowadays is towards sustainable buildings made from a combination of composite construction, in order to take advantage of lightweight construction in wood (economisation of embodied energy, use of renewable materials, prefabrication, reduction of materials) and solid construction (a high level of airtightness, good noise protection and high heat storage capacity) (Preisig, 2002 and Daniels, 1998).

Noxious Substance Avoidance and Efficiency of Recycling
Part of the safe use of resources in buildings resides also in the avoidance of harmful substances such as asbestos, in the choice of renewable materials, for example wood or paper (SIA 112/1, 2004 and Daniels, 1998), as well as in a prudent use of synthetic materials. As these cannot be easily recycled and therefore not brought back completely into the cycle of materials and because they are man-made materials, they do not conform to the sustainability criteria of low-pollutant recyclability or even the recyclability of building material.
In order to attain the goal of closer material cycles in construction, fewer composites should be used, and in particular composites that are easy to separate, to simplify an environmentally friendly dismantling process (SIA 112/1, 2004 and Althaus, 2005). The "global recyclable house"(Löfflad, 2002) is still a future vision, but the great potential of the circular flow economy has been recognized and the enormous quantity of construction waste in the total refuse quantity underlines the importance of the possibility to recycle construction waste: statistics from the year 1987 for the Federal Republic of Germany stated for example that 48% of total waste was construction waste (Daniels, 1998). Dirk Althaus postulates consequently that the "post fossil architecture" applies construction techniques that "allow recycling and up-cycling but avoid down-cycling".[42]

[40] Figures from: BUWAL 1999 p. 39 f.
[41] F. i. Kasser / Preisig / Wydler 2001
[42] Ibid. p. 201

The production and use of secondary commodities helps not only to disarm the growing problem of waste disposal and to reduce the consumption of materials, but also helps to economise on energy: for example recycling-aluminium only needs 5% of the energy needed to produce primary aluminium from bauxite (Althaus, 2005).

Appendix A2.3 Energy-Efficient Operations

Another important subject in relation to the sustainability of architecture is resource-saving building management. This concerns, on the one hand, an efficient management of drinking and wastewater, and on the other hand, measures the level of structure and building equipment. The production of the largest possible amount of the remaining energy needs should be through the production of renewable energies inside the "system boundaries" (SIA 112/1, 2004).[43]
For the classical subject area of operating energy – the atmospheric environment, hot water, light and instruments – in the *Effizienzpfad Energie* the border of the parcel or of the land is taken as the system boundary (SIA D 0216, 2007).[44] Because the embodied energy is defined as a part of the primary energy, the components of the operating energy of a building are also calculated back to their primary energy content. In doing so, one has to consider that, depending on the energy source and the type of energy carrier, a different number of steps are necessary to get from primary energy (such as petroleum in a geological strata) to final energy (such as domestic fuel in the basement) over to effective energy (hot air in a room).[45] The losses at each stage are mirrored in the primary energy factors[46] and are dependent on the capacity factor that is on the efficiency of the technical systems of the building (SIA D 0216, 2007). The nation's building stock, which uses about half of the energy consumed in Switzerland, is believed to offer a potential operating energy savings capacity of 50 to 90% by means of an increase in efficiency in providing energy for heating, hot water and lightning.

Heating Energy

To begin with, it is important to reduce the heating and cooling energy need for the atmospheric environment, which makes up the largest part of the operating energy. The heat requirement of a building can be reduced significantly by forming an insulated and airtight envelope (SIA 112/1, 2004). Simulations through test bodies at the *Lucerne University of Applied Sciences* for the residential use have shown that heating energy – as the embodied energy – basically decreases the more compact a building is (Hönger et al., 2009). But above a certain size of a building, the increase in the necessary energy needed for lighting is disproportionate to the reduction in the heating need.[47]
These findings have been confirmed by a current study for office buildings, commissioned by the Swiss Federal Office of Energy (Humm, 2010). The ideal building envelope factor[48] for operating energy has been evaluated as 1.0. Thus, corresponding considerations should be included in the design of sustainable architecture, as much as considerations about the ideal dimension for the thickness of insulation in its tension between increasing embodied energy (more material) and the concomitant decrease of operating energy. In the sense of the life-cycle approach (SIA 2032, 2010), the consumption of embodied energy and of operating energy must

[43] See also the definition of 'operating energy' in SIA 380/1 and the calculation according to Minergie standard (solar and geothermal energies are not included in the calculation).
[44] Cf. SIA D 0216 p. 35: All energy introduced to the building from external sources is included in the calculation of the target values, "so the usable own production and the exploitable energy gains (…) help to reduce the need for 'provided' energy."
[45] For the definition of the different forms of energy see SIA 2040 (Entwurf zur Vernehmlassung) p. 11 f.
[46] Cf. D 0216 p. 40: Primary energy factors for electricity are in Switzerland for instance 2,0 – 2,9, for wood 0,1. Renewable energies are in this context seen as 'free energies'.
[47] Comparison made on primary energy level.
[48] Ibidem the building envelope factor is defined as: ratio of the thermic surface of the building envelope to the energy reference area.

always be considered together. For the sake of comparability, a temporal component is introduced: embodied energy for construction materials is calculated on an average technical durability of 30 years (amortisation) and is compared with the operating energy (on the level of primary energy) over the same time span. Model calculations have demonstrated that in the case of standard buildings, heating energy xcels the built embodied energy after only half of this timespan. Buildings following the *Minergie* standard raise the embodied energies by around 8% because of the increased thickness of insulation and the comfort ventilation. However, such adaptations are still worthwhile, because after 30 years, the operating energy is less than half of the embodied energy. The additional expenses are amortised after 3 to 4 years (Kasser et al., 2001).
Furthermore through the passive use of solar energy, a lot of heat energy can be saved: To do this, it is important to dispose of enough heat accumulator mass in the form of heavy (massive) building elements (Preisig, 2002) and to optimise the number of openings in the whole envelope and the position of windows and sun protection (Hönger et al, 2009).[49] To avoid overheating during summer, the use of effective heat protection has to be considered.

Water Production
A reduced energy need for the production of hot water can be brought about by the installation of water-saving taps and equipment (e.g. dishwashers and washing machines), by short and well insulated pipes, and by conceptual means, such as siting together the plumbing unit and kitchen in a building (SIA D 0216, 2007).[50] This should be accompanied by a reduction in the use of drinking water and the amount of wastewater. Adequate measures are, among others, the use of rain and groundwater for toilet flushing.[51]

Use of Renewable Energy Sources
It is important that the energy production both for heating (cooling) and for water heating is established through "systems with a high capacity factor and a high allotment of renewable energies".[52] The same applies to the production of electricity for light and electronic devices. One should not forget that the central production of electricity from fossil fuels, together with the high energy loss in transportation, makes a low level of 30% efficiency for the end consumer.
More important is the production of electricity on-site through photovoltaic panels, from renewable solar energy. At the same time, attention is turned to the saving of energy through an efficient use of daylight and the use of corresponding bulbs (LED energy saving halogen bulbs), white goods (washing machines, refrigerators with the AA, A+ label) and equipment (such as comfort air conditioning) (SIA 112/1, 2004).
Sustainable thermal heat can be obtained through geothermic probes, air-to-water heat pumps, solar collection or wood burning. Furthermore, through subsequent heat recovery, heat can be gained from exhaust air and wastewater. Comfort air conditioning systems[53] which are used frequently nowadays, are equipped with heat recovery systems by default. In the case of wastewater there is an enormous unexploited potential: "through the exploitation of all wastewaters of a building the whole water heating could be guaranteed (without regular heat-

[49] A ratio of window surface to the building envelope of 50% has proved to be ideal, whereas the openings' layout and orientation is less decisive.
[50] In well insulated buildings (e. g. Minergie-P standard) the energy need for hot water often tops the heat requirement for the heating.
[51] Energy-conscious user behaviour offers large savings potential of water consumption. However architecture has limited impact on such behaviour. See also SIA 112/1
[52] Ibid. p.13
[53] Controlled ventilation is an essential precondition for Minergie and Minergie-P certification.

ing)"(Rota, 2010). The advantage is that the same heat pumps that are already used for other energy sources can be used to gain heating energy.

Intelligent Equipment

Furthermore there are different operating concepts which thanks to intelligent equipment, can react to changing conditions and thus optimise the energy consumption and account for the sustainability of a building. To begin with, one has to consider the passive elements of construction, which have an inherent self-adjusting behaviour. For example heavy construction parts, such as massive ceilings and concrete cores, that can buffer periodically recurrent temperature oscillations in the building through great storage mass: if the temperature in a room rises during the day, the inert storage mass acts as a temperature reducer and buffers the temperature rise. With the descent of temperature at night, the heavy elements release the stored heat and buffer the temperature descent (Daniels, 1998).

Furthermore, nowadays the possibility exists to use highly developed control systems for the building, in order to optimise the energy consumption according to use and environmental parameters. A correlative pilot project was launched at the ETH Zürich in 2009 for the New Monte-Rosa hut of the Swiss Alpine Club on the Swiss Alps (ETH Zürich, 2010). The implemented technique "consists of robust and reliable single components, that deploy their efficient agency through interaction",[54] and thus they allow for high energy efficiency and a high degree of self-sufficiency (water and electricity) in the adverse conditions of the extreme alpine climate with its difficult accessibility, combined with the allocation of a comparatively high level of comfort (mechanical ventilation, tempered inside spaces, partially hot showers and so forth) for the guests. All building equipment is operated by a digital energy management system that can be influenced, if necessary, by the hut warden. It is important with such a system that the control, as with the New Monte Rosa Hut, is fed with renewable energies, in this case through highly efficient photovoltaic panels. The profit from the renewable energy sources (photovoltaic and thermal solar collectors) and the consumption of the building are strongly dependent on the weather. The respective use will obviously influence the consumption. In order to allow an 'anticipatory control', forecasts of weather and visitor flows are collected into the system and considered. It is thus possible "to optimize not only the momentary operating of the hut, but also to maximize the energetic autarchy over many days".[55] The case of the New Monte-Rosa hut is clearly a special case, but in remote zones such concepts might help to establish sustainable buildings and, as the case might be, to legitimise a construction.[56]

Intelligent Use

At the same time, there are more and more people who argue against the general high-tech boom, which does not only involve architecture.[57] They warn about the danger of over-mechanisation, which might result in the exact contrary of what was intended, disguised under the cloak of energy-efficiency. In the case of highly insulated houses, the behaviour of the user has a decisive influence on energy-consumption: "a lack of knowledge, carelessness or the inability to cope with the extreme techniques, have a negative impact."(Kaltenbrunner, 2008). If the user is not aware of, or unable to cope with the need for regulation, then the most complex system of regulation is useless. "Those who try to construct in an environmentally friendly way cannot put their trust in a complex and opaque technical system which requires an engi-

[54] Ibidem: Sulzer and Menti p.172
[55] Ibidem: Guzella and Fux p.175
[56] See also the report "Schutzhütte in der Steiermark" (pos architects) in: Hegger / Fuchs / Stark / Zeumer 2008, p. 210.
[57] See also Gauzin-Müller 2002, p. 17: „Mitten in Europa findet ein goldener Mittelweg zwischen den beiden Extremen Low-Tech und High-Tech immer mehr Anhänger. Der wesentliche Unterschied zur Low-Tech-Architektur ist sein zeitgemässes Auftreten, unterstützt durch die wohlüberlegte Verbindung von traditionellen Materialien mit innovativen Industrieprodukten."

neering degree to operate" writes Robert Kaltenbrunner in the *Energieatlas* and calls for "systems that are oriented towards the user and not towards complex technologies."[58] Also Thomas Herzog is critical towards an "extended and often unnecessary automation" and raises the issue of the "right balance": "consequently electronic systems in buildings should be user friendly, and to a lesser degree, to automatically condition change in the context of the building envelope."(Herzog, 2008). The most sustainable condition would occur when a user would be able to learn through "intelligent systems", how to save energy by his own behaviour.

Appendix A2.4 Durability and Flexibility

The longer the service life of a construction element or a building is, the less accountable are the annual consumption of resources in general, and in detail in the case of embodied energy (SIA 2032, 2010). As the payback time is an important factor not only for the economic but also for the energy sustainability of building elements, the choice of long lasting constructions and building elements is a constitutive architectonic criterion of sustainability. The life expectancy of building elements is determined by the quality of the material and the way they are combined. If a long lasting use is the aim, the choices of the material and construction, as well as technical care, are fundamental.

Planning According to the Life-cycle

Cycles of maintenance are part of the life of any building (SIA 2032, 2010).[59] Therefore it is important to know the different life span of construction elements and material layers, and to allocate them depending on "life expectancy" and maintenance intensity, in a way that they can be easily replaced and maintained (Hegger et al., 2008 and Preisig et al., 2004). Thus the system separation allows for the replacement of single components without destroying those that are still functioning.[60] A sustainable façade, for example, distinguishes itself by its "modularity and the simple way of construction of the different layers of the façade through bolted connection (…) create an economic construction, which produces almost no waste, is adapted to new insulation requirements and at end of its life span can be taken apart again" (Preisig et al., 2004).

As early as the planning process of sustainable architecture, one has to consider not only a construction that works in accordance to the life span of the building, but also the possibility of the reuse or even the continuation of use of as many materials or elements as possible through transformation and dismantling (Hegger, 2008).[61]

Tolerance of use and Flexibility

Sustainable architecture means also a tolerance of use and flexibility: the quality and life expectancy of the construction elements should focus on the life span of a building and on the changing needs of the users. A sustainably planned building has to synchronise with social and economic changes and the consequent changes of needs. Possible transformations and adjust-

[58] Ibid.

[59] In the construction sector life cycle cost calculations are primarily used for calculation of profitability. See also target agreements of SIA 112/1: economical sustainability.

[60] The system separation is made in three levels: primary, secondary and tertiary system. The primary system contains durable components, namely supporting structure, building envelope and basic structure of the building services. Interior fittings and buildings services equipment count among the secondary system. The tertiary system is composed of furnishing and devices.

[61] The German "Kreislaufwirtschaftsgesetz" (KrW/AbfG, 2007) prescribes – economic sustainability given - the recycling of all scraps. Recycling and upcycling are preferable to the downcycling frequently employed. An EU law in preparation prescribes a full take-back obligation for building products. In other domains the "polluter pays" principle has already become standard, so for example with electrical devices in Switzerland. See also target agreements of SIA 112/1.

ments should be anticipated in the planning, and thus allow for a high level of flexibility in the buildings (Daniels, 1998).
As the whole life cycle can never be entirely predicted, strategies for increasing flexibility should be considered, such as the construction of an enduring primary structure with a light interior design that allows for easy changes to the spatial arrangement (Hegger et al., 2008). A high degree of flexibility can also be attained through the use of prefabricated parts, which build upon a modular base structure.[62] The advantage of such concepts lies also in the prefabrication of the elements in a factory or plant: this is generally more efficient and allows for the economizing of embodied energy. Waste and discard can be minimised during production and eventually recycled, and at the same time, the customised production enhances the life span of the components.

Appendix A2.5 Adequacy and Comfort

A fundamental criterion for architectural sustainability is the securing of an adequate level of comfort for the users of a building. This is about the provision of spaces that are low in pollutants, a comfortable climate and a high functionality (KBOB/IPB, 2004). To this end, the current target agreement of the SIA considers criteria such as optimised daylight conditions, a high sense of security, a low level of allergenic and harmful substances in the air, low radiation emissions, good summer sun protection and low noise or vibration emissions (SIA 112/1, 2004).[63] To ensure true sustainability within the criteria of comfort, the question of the adequacy of the claims has to be asked: "this is not about a change of our lifestyle or a return to the stone age, but if we are willing to accept that in summer it is hotter and in winter colder, I believe, that we can attain a degree of comfort by following the rules of nature." (Behnisch, S., quoted after: Gauzin-Müller, 2002).
In general, one can observe that the potential for the reduction of polluting emissions of buildings is the less, the more complex the needs of the user, which one has to accommodate, are (Kasser, 1999).
This question about the adequacy of the comfort-claim in buildings in a particular context and in a particular place, is notably relevant in combination with tourism architecture: on the one hand the expectations of comfort – in particular for dwellings – are extremely high, because "architecture for holidays must radiate a feeling of home (…). The guest expects a complete service for his well-being" (Opaschowski, 1996). On the other hand, hotels, visitor centres and other similar tourism-specific buildings are located in isolated places, often close to nature or even in environmentally protected sites. To build and to manage a 5-star hotel in an inaccessible place is clearly less sustainable than to build an alpine hut at the same place. Examples like the above mentioned New Monte-Rosa hut show how it is possible to reach a quite high level of comfort even through resource saving ways (ETH Zürich, 2010). And one should not forget that the concept of the "effective area reduced to a dimension based on persons" (Künzler, 2001) has a large influence on the compactness and thus also on the sustainability and energy efficiency of a building.

Appendix A2.6 Architectural Quality and Urbanistic Integration

The goal of a holistic view that is at the same time oriented towards sustainability cannot be the reduction of the environmental impact to zero. Rather it is about the reduction of the tensions between individual needs and requests, or more precisely, about the attempt to harmonise them and thus obtain a high global quality of the system (Künzler, 2001).

[62] Cf. the „skydeck" concept by Richard Horden Ass. (Daniels p. 220 f.)
[63] The Swiss Minergie-Eco and Minergie-P-Eco standard also contain appropriate criteria.

As shown, the criteria for sustainability are manifold: they reach from the minimisation of operating energy to the use of renewable energies, the creation of enduring, but at the same time flexible, buildings to an adequate level of comfort provision.
Many of the listed sustainability criteria can be optimised through a high level of compactness of the building – the land and general resource consumption as much as the need for embodied energy and operating energy. This demand for compactness and thus for a concentration of settlements and for the establishment of large buildings are counter to the fundamental principles of sustainability of high architectural quality and sensitive urbanistic integration. This is challenge for all the involved parties that cannot be underestimated (SIA 112/1, 2004 and Romeiss-Stracke, 2008). The development of modern mass-tourism since the middle of the 20th century led to an uncontrolled growth of tourist destinations and thus of a tourist architecture aiming only to profit.[64] In Switzerland and Austria the huge hotel complexes in a chalet style – a mistaken adaptation of the local architecture language are instantly recognisable.[65]
It appears evident that contemporary discussion on sustainability in the context of tourism architecture bears fruit on every level, also because – and this not only concerns Alpine countries – the Austrian State Prize for Architecture is given every four years specifically to tourist architecture with the aim "to decorate excellent architectural solutions in the context of tourism and leisure that react in an innovative way to the challenges of contemporary developments in this field. In the difficult area between rapidly changing leisure habits and increasing demand for the quality of the guests on the one hand and the needs of a responsible handling of resources on the other, examples, that managed to transform these different needs in an whole embracing solution and thus propose important orientation marks for the future development are rewarded." (BMWA, 2008).

Appendix A2.7 Sustainability and Tourism – Architectural Attributes

Following the above argument, the following architectural attributes are proposed:

1. Saving Resources

Sustainable buildings are conceived to guarantee the optimal application of all resources that are necessary for their construction and deconstruction.

2. Energy-efficient Operations

Such buildings contain energy-efficient operating concepts that react to the need for comfort and the utilised capacity.

3. Durability and Flexibility

Structural arrangements allow for a high tolerance and flexibility of use or facilitate a long-term use of the building.

4. Adequacy and Comfort

Sustainable buildings provide comfort with regard to climate, cosiness and functionality, which are appropriate to the particular context and place.

5. Architectural Quality and Urbanistic Integration

Sustainable buildings show a high level architectural quality and integrate in a sensitive way into their environment.

[64] Cf. ibid. „Auf dem Weg zu einer Baukultur im Tourismus"

[65] The sustainability criteria for high architectural quality comprises amongst other things visual and cultural integration into the local situation, this is assessed on the basis of dealing sensitively and at a high artistic level with the actual topography and local building culture.

Appendix A3 Attributes of Cultural Sustainability in Tourism

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Appendix A3.1 Problem

Many touristic services are more or less directly defined by qualities and values resulting from cultural processes, and can, therefore, be identified as cultural products. From typical cultural landscapes of a specific destination, via historical townscapes and monuments, local architectural styles, feasts, customs and regional food, to the cultural attractions in a more specific sense, such as festivals or museums – culture represents a central resource for tourism.

However, culture is never an unconditionally given fact. Culture as a result of complex interactions between actors, places, traditions and ideas, has to constantly be reinvented, renewed and redeveloped. Thereby, for instance, the tourist entrepreneurs in touristic regions play a central active role. Hence, a range of cultural and socio-cultural aspects must be considered in the debate on sustainable tourism in order not to let tourism destroy its cultural foundations, but rather, to ensure them in the long term by cultivating and actively developing them.

Beyond tourism, the increasing importance of cultural and socio-cultural considerations within the current debate on sustainability becomes apparent. The Brundtland Report from 1987 does not yet consider culture. The resolutely cultural perspective on societal developments, which has become more widely accepted since the 1990s, is now also reflected in the debate on sustainability.

	Cultural Qualities / Values / Resources	**Problems related to tourism**	**Condition for prevention and development**
Cultural landscape as a result of a specifically rural / commercial use of land / landscape	Aesthetic qualities Regional / local identity Recreation value	Conversion or reshaping of the landscape, exploitation, depletion, urban sprawl, etc.	Protection, land restoration, preservation of traditional usages, research, critical innovation
Historical townscapes	Aesthetic qualities Historical significance Artistic / cultural value of individual buildings / urban entities Evidence of regional / local / national identity	Demolition / destruction Conversion Suppression Overexploitation Disneyfication	Protection, prevention, reconstruction, critical innovation and development

Local customs, forms of living, production, and economy	Cultural attraction, historical significance, evidence of local / regional identity and culture	Folklorisation, souvenirs, kitsch, standardisation, / "McDonaldisation"	Preservation and critical innovation, active reconsideration, reenactment, research and mediation
Popular culture, traditional forms of art and music	Cultural attraction, historical significance, evidence of local / regional identity and culture	Extinction, suppression, folklore	Preservation and critical innovation, active research and mediation, collection
Local history, monuments	Cultural attraction, historical significance, landmarks, identity of a site / region	Reduction to single monuments Overexploitation Disneyfication	Protection and preservation, research and mediation
Local cultural offers	Local / regional singularity and specifics	"Suppression" through imported culture "McDonaldisation"	Active aid and mediation, integration of local culture into touristic offers, creation of adequate fora and publicity
Cultural institutions, museums, collections, festivals	Often main attractions of a destination	Culture of elites, danger of one-sided aid on the cost of smaller institutions, local and contemporary culture	Development and preservation of a manifold cultural environment, promotion of alternative niches
Regional kitchen, products and specialities	Identity of a region, culinary attractions	Standardisation	Support local suppliers and products, promote diversity

Table 18: Survey of different cultural resources, their significances for tourism, possible conflicts, and conditions for preservation and development

Appendix A3.2 Concepts of Culture

There exist a vast variety of definitions of the term "culture". We refer to the following four approaches:

Culture defined as societal awareness, as a meaningful system creating identity and reflecting society. This definition of culture relates to questions of social identity and individual meaning. Thus, culture includes everything a society needs for its own perception, reflection, and identification. This model of culture tends to establish national or ethnical cultures based on a concept of differences, regardless of possible exchange.
Culture defined as process, production and exchange of ideas, meanings, knowledge, values, histories, etc. This process-oriented approach focuses on continuous production and exchange. Ideas, images, signs, and narratives are constantly circulated and exchanged, new meanings and values are negotiated, and a continuously developing knowledge is produced. With a particular regard to multiple and complex cultural processes of globalisation, an open and functional concept of culture proves useful.

Culture defined through works, cultural expressions, and artefacts. In this definition based on phenomena and expressions, the actual cultural products are central. Culture is the sum of artworks and cultural artefacts from all cultural disciplines including art, architecture, theatre, music, and all popular and folk cultural forms of expression. The reduction to categories and products essentially corresponds to the pragmatic handling of the cultural area. The question to what extent culture should respond to economic criteria is one of the most central points of conflict.

Culture defined as a "way of life", is a system of meanings in which social organisations are communicated, reproduced, experienced, and researched. This last definition, which is strongly related to the everyday, puts the emphasis on individual expression. It assigns the shaping of individual identity and the expression of belonging to certain social groups and communities. It focuses on fashion, consumerism, or the preferences of certain music styles, for instance. Culture as "a way of life" could be seen as the contemporary form of the first definition (culture as societal awareness), however, society is no longer seen as a national or ethnic entity but rather as a heterogeneous compound of different communities and interest groups.

Appendix A3.3 Different Discourses on Cultural Impacts of Tourism and Globalization

The cultural effects of tourism within a specific region are being described very differently according to different theoretical perspectives and depending on the concept of culture applied. From the vast number of theoretical approaches from, for example, sociology, anthropology, and ethnography, we attempt to demonstrate the spectrum by referring to four positions as a showcase.

Appendix A3.3.1 Culturally motivated Critique of Tourism of the 1960s and 1970s

With a strong reference to the first of the above models of culture (as societal awareness), many authors of the 1960s and 1970s have described the cultural effects of tourism as a unilateral process of gradual expulsion and destruction of local culture through the culture of travelling tourists. Tourists have been seen as a quasi remote-controlled conform mass (Enzensberger, 1964 and Henning, 1996). The socio-cultural conflict usually consisted in the clash of comparatively rich actors from the industrialised and urbanised north with actors from rural and less developed regions in the south or from the periphery. The culture of the privileged tourists was perceived as hegemonic, homogenous, and standardised, as opposed to the fine-spun cultural peculiarities of the threatened destinations (Bachleitner et al., 2000). Abandonment, limitation or concentration of touristic developments and infrastructures, for instance in the form of segregated developments, was seen as a possible approach.

Appendix A3.3.2 Culture of Holidays and Service as Mediator between the Cultures of Visitors and the Visited.

In the 1980s and 1990s, more sophisticated models were developed to describe the cultural interaction between visitors and visited. Observations of the everyday life of touristic destinations show that there is a coexistence of very different cultures rather than confrontation. Areas between the cultures of the two players can be discerned, which are indeed differently affected, but which function nevertheless as a kind of cultural mediation zone (Thiem, 1994). Tourists escape their habitual everyday life and adopt a culture of travelling, which is determined not only by the habits of their provenance but also by transit (rapid encounters, temporary stays in hotels or holiday flats, etc.). They are immersed into an everyday life of tourism, a specific

culture of holidaymaking. The visited that come into professional contact with the tourists have left their private culture and are immersed into a culture of service and attendance. Hence, the encounter of the visitors and the visited does not take place in a sudden confrontation between two opposing cultures, but rather players of a holiday culture shaped by their origin, meeting with players of a locally established service culture.
The so-called scheme of six cultures (Schimany, 1997) introduces, additionally, a "culture of interaction" in the cross-section between holiday culture and service culture, and names a "global culture" which includes all five circles mentioned up to now.

Appendix A3.3.3 Cultural Effects of Globalization, Global Standardization vs. Local Versatility

The terms "Disneyfication" (the replacement of originals by fakes and copies) and "McDonaldisation" (the standardisation and homogenisation of image and supply) describe a range of potentially negative effects of globalisation. According to this, increasing mobility, global business, and tourism have a share in cultural standardisation and homogenisation. At first sight, with regard to the touristic infrastructure for instance, this seems to be confirmed. Many hotel chains and restaurant chains offer globally standardised goods and services in identical buildings. Equally, the transport industry is geared to global standards. However, recent research shows that contrary developments are possible. The global exchange of signs and ideas also enhances the differentiation of local singularities. Local values become increasingly meaningful in global comparison. If culture is understood as a process and continuous exchange of ideas and knowledge, then globalisation actually leads to an intensification of cultural development. Today it is assumed that tangible cultural aspects of globalisation may well be initiated by globally circulating ideas and images. However, their production and differentiation is predominantly local (Appadurai, 1996). While on the one hand global standardisation of services proceeds, on the other hand new potentials of cultural differentiation arise for the predominantly local players in tourism.

Appendix A3.3.4 "Contact Zones"

Tourism, touristic activities and touristic places can be considered "Contact Zones" (Clifford, 1997), with regard to network-theory and postcolonial discourses. These Contact Zones represent a specific situation, where players of different cultural contexts meet and exchange. This exchange is multidirectional and contributes to a continuous shift of references, demands and habits concerning all participating players – the visitors, the visited, but also immigrant workers. Values, imaginations, and the subjectivities of visitors and the visited are constantly available. Consequently, tourism itself as well as migration and global business) stands prominently at the core of current cultural developments and innovation.

Appendix A3.4 Debates on Adding Cultural Attributes to the Concept of Sustainability

What is cultural sustainability? The term "culture" is used in the broadest sense to suggest values and aspirations, traditions and shared memories and the way people develop, receive and transmit these, and the ways of life these processes produce. "Sustainability" or "sustainable" is originally used in context to the environment, depicting a living system which can maintain a quality of life while also conserving natural ecosystems, perpetuating bio and socio-diversity. The two words together depict the developing, renewing and maintaining of human cultures, which create positive, enduring relationships with other people and the natural world.

Appendix A3.4.1 The Fourth Pillar of Sustainability, culture's essential role in public planning (Jon Hawkes)

Hawkes (Hawkes, 2001) argues that '[a] society's values are the basis upon which all else is built. These values and the ways they are expressed are a society's culture. The way a society governs itself cannot be fully democratic without there being clear avenues for the expression of community values, and unless these expressions directly affect the directions society takes. These processes are culture at work.' According to Hawkes, cultural vitality is as essential to a healthy and sustainable society as social equity, environmental responsibility and economic viability. In order for public planning to be more effective, its methodology should include an integrated framework of cultural evaluation along similar lines to those being developed for social, environmental and economic impact assessment. When culture is understood to denote the social production and transmission of values, meaning and purpose, and it is recognised that the expression of social goals and aspirations is at the heart of the public planning process, the connection between culture and planning becomes clear. As also does the potential for the use of culture as a core element in the mechanisms that facilitate effective public planning.
Hawkes argues for the development of a 'Cultural Framework' to stand alongside similar social, environmental and economic instruments that can be used to evaluate ALL public policy. He argues that the emerging focus on issues such as sustainability, well-being, community building and civic engagement needs a clear cultural perspective as a basis for successful implementation.

Appendix A3.4.2 The Politics of Cultural Sustainability

Turner (2010) argues in his article that in order to create a common purpose among progressives and a majority program in a broader coalition, a programme is needed that connects a materialist perspective of innovation, fair pay, decent work, chances to move forward and social and physical security, with a post-materialistic or cultural perspective on positive freedom, a sustainable environment, an open outlook at the world around us, and an acceptance of cultural diversity without opting for a hollow multiculturalism; a program that sets out not only for change, but also for continuity – for what we want to cherish.
According to Turner (2010) such a program counterbalances the strong centrifugal forces in the economic, cultural and political realm: of growing inequality, hardening cultural cleavages and division lines of distrust and abstention in our democracies. Moreover, it stops commercialising the public good; instead it strengthens the res publica by introducing a public ethic and orientation, also in the private and tertiary sector. It will also design an agenda of modesty, self-restraint and moderation, built around notions of ecological, social and cultural 'sustainability' against the hyper-consumerist rat race in society. This could be seen as a restoration of the concept of quality of life in a new fashion.

Appendix A3.4.3 The Cultural Dimension of Sustainable Development

A contribution by Katina Kuhn from the Institut für Umweltkommunikation der Universität Lüneburg shows possible perspectives for an integration of the notion of culture into the concept of sustainability, as well as conceivable junctions to the international discourse around culture and (sustainable) development. While culture was not referred to in the Bruntland-Bericht Report of 1987, since the 1990s culture has taken hold as a central concept in relation to societal developments. The dispute around the duality of culture and development culminated at the beginning of the 1990s in the Report of the World Commission on Culture and Development "Our Creative Diversity" (UNESCO, 1997). In her analysis of ongoing debates on cul-

ture and sustainability, Kuhn mainly refers to the German-speaking region. Important players are, for instance, the Kulturpolitische Gesellschaft (KPG) with the Umewltbundesamt (UBA) and the Ministerium für Umwelt, Naturschutz und Reaktorsicherheit. As examples for the debate in the 1990s, she points to two documents of international policy.

One is the action plan "The Power of Culture", passed in 1998 at the UNESCO-Conference in Stockholm (UNESCO, 1998a), and the other is the action plan "Agenda 21" from the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992. In "The Power of Culture" it was proposed that governments should recognise culture in such a way that cultural policies would "become one of the key components of endogenous and sustainable development" (UNESCO, 1998b). While UNESCO makes the reciprocity of "cultural diversity" and "sustainable development" the first principle of their action plan, in the formulation of Agenda 21, culture plays no role as an anchor for questions of the realisation of sustainable development. Solely, in part III of the document entitled "Strengthening the Role of Major Groups", the word "cultural" appears several times.
A further correlated question is, whether there is a need for a culture of sustainability in addition to recommendations, pleas, and norms, in order to anchor the approach of sustainability in society in the long term.

Appendix A3.5 The Approach of "Cultural Heritage"

The United Nations Educational, Scientific and Cultural Organization ('UNESCO') has been the leading force internationally in developing the field of cultural heritage protection. It has adopted a number of important international instruments, most notably the Hague Convention 1954, which is designed to protect cultural heritage threatened by armed conflict; the 1970 Convention which seeks to regulate illicit trade and the transfer of ownership of cultural heritage; and the World Heritage Convention 1972, which provides protection for cultural heritage of 'outstanding universal value'. More recent UNESCO instruments have dealt with underwater cultural heritage (2001) and intangible cultural heritage (2003). The development of UNESCO's programme of work in this field reflects changing societal values and perceptions about the nature of cultural heritage, and the extent to which it warrants legal protection.
The term "cultural heritage" is generally used to represent the evidence and protection of human past regarded worthy of preservation. The word "heritage" suggests an inheritance of something of value, which has been inherited and should be preserved in order to be passed on to future generations. The word "cultural" indicates that this heritage has relevance to humankind and simultaneously provides evidence of human intellectual development.

Cultural heritage is commonly divided into two categories: tangible and intangible. Tangible cultural heritage comprises remains of human existence that are material, in the sense that we can touch them. Tangible remains can be sub-divided into movable objects, such as paintings and antiquities, and immovable buildings, monuments and sites. Intangible cultural heritage, sometimes referred to as 'living heritage', cannot be touched, but might be seen (a dance, or performance of a play or ritual) or heard (music, or a spoken language). These divisions derive from property law, and the term 'cultural property' is sometimes used synonymously with 'cultural heritage'. Tangible cultural heritage tends to be particularly associated with the monuments and works of art of Western civilization; intangible cultural heritage with the traditional ways of life, values and beliefs of the world's indigenous peoples.

Cultural heritage is key to expanding the general body of knowledge regarding the past and for public education and enjoyment. Exactly what should be encompassed by the term is a matter

of opinion and, over time, notions of the nature and extent of what should be preserved have tended to become broader. Factors such as age and rarity clearly play some part. A flint tool from the Palaeolithic era is part of the cultural heritage; a musical instrument made today, using skills that are dying out, may also be part of the cultural heritage. A mobile phone, while a commonplace item today, may form part of the cultural heritage in 100 years' time. The preservation of context is also important. A flint tool, by itself, is of little interest unless we know something about where it was found, who used it and what it was used for.

	Recommendation	**Contents**
1956	Architecture and Town Planning	Standard regulation for competitions in architecture and town planning
1956	Archaeological Excavations	General principles about protection of archaeological heritage, regulations of excavations, trade in antiquities and international collaboration
1962	Safeguarding of the Beauty and Character of Landscapes and Sites	General principles, application of protective measures, education of the public
1968	Preservation of Cultural Property	Definition of the term cultural property, preservation and salvage measures
1972	Protection of the Cultural an Natural Heritage	Definition of cultural and natural heritage, protective measures, educational and cultural actions, international co-operation
1976	Safeguarding and Contemporary role of Historic Areas	Definitions, national, regional and local policy, safeguarding measures, technical, economic and social measures, research and education
1989	Safeguarding of Traditional Culture and Folklore	Definition of folklore, conservation, preservation, dissemination and protection

Table 19: Overview UNESCO Recommendations Charters & Standards

Appendix A3.6 Survey of Aspects of Cultural Sustainability

Depending on societal perspectives and concepts of culture, a variety of different aspects emerge which need to be taken into consideration in relation to cultural sustainability. These deal with, on one hand, the necessary protection and preservation of cultural testimonials ranging from singular cultural artefacts and works concerning the Living Cultural Heritage (customs, modes of production, etc.), and, on the other hand, the mediation of complex cultural interactions, including the intensification of exchange and facilitation of differentiation.

Concepts of culture	Aspects of cultural sustainability
Culture as societal identity, as meaningful system	Concepts of Cultural Heritage
Cultural works and productions	Protection, preservation, restoration, preservation of the cultural heritage (incl. Living Cultural Heritage)
Culture as process, exchange of ideas, images and knowledge, culture as "Contact Zone"	Access and mediation, exchange and participation, reflection, development and differentiation
Culture as "way of life"	Encouragement of tolerance and diversity, free interpretation and variation

Table 20: Aspects of cultural sustainability in relation to concepts of culture

Appendix A3.6.1 Protection, Preservation, Conservation, Restoration, Reconstruction

In relation to cultural sustainability, the protection and preservation of cultural heritage is central. Its departure point was the first attempts of conservation principles in the 1950s. The base for protecting constructions of historic value was establishing an inventory. Thereby, objects from different eras have to be considered. Besides preservation and conservation of the original state, questions of proper restoration and eventually reconstruction arise. A qualitative and quantitative regulation of interventions is needed to allow development. The continuously evolving debate around Cultural Heritage opens up into an integral view on historic and cultural environments. In order to prevent historic and protected entities from degenerating into mere museums, appropriate developments must be permitted within the cultural and communal context, and approaches of preservation need to be put into a productive force field with approaches of innovation.

Appendix A3.6.2 Preservation of Traditional Forms of Expression, Production, and Customs

The extension of the Cultural Heritage by the Living Cultural Heritage in the 1980s widens the scope of criteria related to the preservation and continuation of traditional forms of expression and production. Thus, there is a shift in focus from the preservation of fixed entities such as buildings, to a conscious continuation of certain practices such as historical modes of production. The concept of preservation therefore includes appropriate forms of development and change besides protection and conservation. Such a perspective proves useful even in the handling of architecture or urban entities worthy of protection. A critical process of development must be possible beyond "museumisation".

Appendix A3.6.3 Aspects of Free Access, Mediation, Interpretation and Variation

From the perspective of culture as a continuous process of exchanging of ideas, images, knowledge, or as a Contact Zone and place of meeting, a range of additional criteria can be deduced, which are significant for a sustainable handling of culture. These apply to free access to culture, mediation not only of stereotypes but also of complex interrelations, and a scope of interpretation and variation. Culture as process cannot in the first place be linked to cultural products, but rather to the intensity of debate. Thus, on the periphery, touristic developments in particular play a decisive role, because the encounter of entirely different attitudes and modes of living is inevitable therein. By focusing on mediation it is possible to avoid a perception of local culture as merely an exotic environment, or the exclusive setting of hegemonic benchmarks by the culture of the travellers. In a similar way to ecological auditing, one could assess the cultural impacts of touristic developments and establish recommendations for appropriate measures.

Appendix A3.6.4 Aspects of Self-Determination, Participation, Reinvention, Differentiation

Finally in relation to the approach of culture as "way of life", aspects of self-determination become relevant. Accordingly, as well as free access to culture,, personal freedom of expression and free choice of lifestyle are also important attributes of cultural sustainability. The promotion of tolerance and diversity is connected to this.

Appendix A3.7 Conclusion

Traditional monument conservation and, moreover, the current approach of Cultural-Heritage has developed in a more or less direct relation to tourism. Historic monuments and local traditional or modern architecture, together with the landscape, are the most important references for the identity of a place, and in many instances they stand in the centre of the marketing of a touristic destination. Labels of Cultural-Heritage, in turn, offer an interesting potential for the tourist sector.
While aspects of cultural sustainability that apply to the protection and preservation of cultural heritage may have played an important role for many touristic suppliers long ago, aspects of mediation or targeted promotion of local players and peripheral productions of culture may be less relevant.
Another key for culturally sustainable development lies in a critical handling of the complex cultural role a tourist necessarily plays in the respective communal context.

The following table Table 21 summarises the attributes of cultural sustainability.

	Attributes	Affected players
Protection, conservation and preservation	- Conservation, preservation, critical renewal of monuments and historic buildings and townscapes etc. - Conservation and preservation of naturally grown cultural landscape - Preservation of cultural heritage of a region incl. "Living Culture"	Politics, communities, cities, touristic suppliers, organisations, associations, tourists
Mediation	- Appreciation of local cultural singularities - Mediation of local history and culture of a place and region - Insight in current social and economic developments - Insight in local cultural life - Insight in current local cultural scene - Reflection of the cultural function of the touristic development of a place or a region	Tour operators, touristic suppliers, local institutions and associations, tourists
Promotion	- Promotion of cultural diversity - Consideration of local culture, and accordingly, promotion of local cultural activities - High requirements in quality for architecture and design - Inclusion of contemporary art	- Politics, touristic suppliers, investors

Table 21: Attributes of cultural sustainability

Appendix A4 Criteria and attributes of sustainable space planning/atmosphere and events of touristic destinations and institutions

Dieter Pfister

The following report first gives an overview of the literature and the specific proposals of general criteria of sustainable space planning and events from the USA, Great Britain, France, the Netherlands and larger German speaking countries. This is followed by research into the development in practice and the literature about these sustainability criteria and indicators in the specific field of touristic destinations and institutions.

Further on it is shown that the criteria of sustainable space planning and events are equivalent to the qualities that distinguish the brand space and its atmosphere because the brand idea has always been based on sustainability (self-reference, continuity, long-term significance etc.). These criteria of the so called quality of brand space are now linked to the indicators of the sustainable space planning and events in the touristic field which were found during the research. In this way, the existing general criteria can be specified and strengthened, especially in relation to touristic destinations and events.

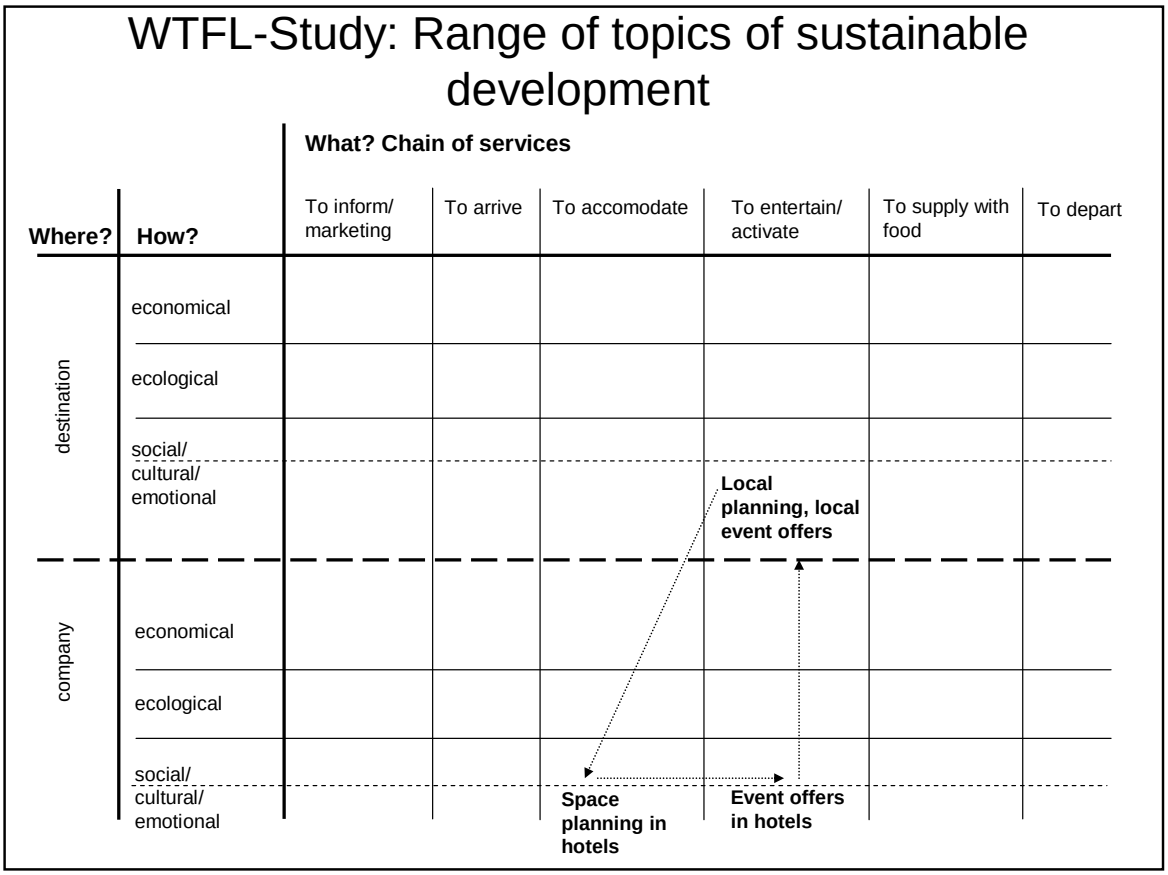


Figure 14: Structure of the topics of the following study

Appendix A4.1 Sustainable space planning/atmosphere in general

USA

The US literature and discussion about sustainable space and local planning, architecture and properties has until now focussed on the ecological and economic dimension of sustainable development. Only a few authors write about the social and cultural dimension and the emotional aspects of space planning (well-being, cosiness, emotional comfort etc.).

Kevin Lynch pointed out early on the important characteristics of physical forms that affect the well-being of human beings in a town (Lynch, 1960):

- Uniqueness
- Clarity of form
- Continuity
- Dominance
- Clarity of the links
- Differentiation of the direction
- Extent of view
- Awareness of movement (characteristics which make feel the observer the movement through the sense of face and muscle)
- Chronological order (orders that influence more the relations between the elements than separate elements)
- Name and meaning (easier memorability).

In the 1980s Donald Norman began to develop a user-oriented perception of design, what he called "user-centred design" and "emotional design". He shows emotions as a central significance for the human ability to understand the world.

The "National Institute of Building Sciences" has recently done research on the development of a broad and holistic view under the keyword of "Psychosocial Vale of Space" (2008). Judith Heerwagen summarises the relations between human needs and environment and involves the research-results of another author, who had already done earlier work on this topic, the Australian biologist Stephen Boyden. In 1971 he identified "well-being-needs", which should be transposed into space planning ("building design"). The following Table 22 shows the summary of Judith Heerwagen.

Links Between Basic Human Needs and Environments	
Social engagement	Comfortable meeting places, indoors and outdoors; circulation systems and layouts that support informal interaction; attributes that draw people to space and encourage conversation (views, humorous décor).
Cultural and Collective Meaning	Celebratory spaces; artefacts and symbols of cultural and group identity; sense of uniqueness.
Relaxation and psycho-logical restoration	Quiet spaces with low sensory stimulation; connections to nature; distant views; outdoor seating or walking paths in visually appealing landscapes.
Visual and aural privacy as needed; movement between interaction and solitude	Enclosure or screening; distance from others; ability to regulate the desired degree of social interaction by moving between spaces or by manipulating personal space. Variety of informal social spaces to encourage relationship development.
Learning and information sharing	Good acoustics for training/learning environments; good visibility to support situation awareness; layouts, meeting spaces, and circulation that support conversation and information exchange without unduly disturbing others.
Connection to nature and natural processes	Daylight, views of nature outdoors, careful use of indoor sunlight, natural ventilation, interior plantings, nature décor, and nature patterns in spatial layouts, furnishings, and carpeting.
Sensory variability	Daylight access; indoor sunspots; variation in color, pattern, and texture; natural ventilation
Sound levels similar to nature	Operable windows to allow connection to positive outdoor sounds; acoustic conditioning to reduce equipment and industrial noise, yet allowing for some human sound ("buzz") that is energizing.
Interesting visual environment with aesthetic integrity	Adoption of naturalistic, bio-inspired design; patterned complexity; reduced monochromatic environments; more organic layouts and forms.
Wayfinding and making sense	Landmarks, variability of space to serve as location cues, windows to orient by outdoor views, use of color and pattern on walls or carpeting to provide location and movement cues. Also appropriate signage and visual displays to develop overall sense of space.
Exercise	Indoor gym, outdoor bike and hiking paths, open stairways to promote interaction and walking, visually interesting landscape to entice exploration.
Sense of equity	Design of spaces and allocation of amenities that shows concern for the health and well-beeing of all occupants, visitors and other users of the space.

Table 22: Relations between human needs and environmental conditions (Heerwagen, 2008).

The results from this scientific research had no effect on the development of practical models and criteria of labels of sustainability. So the US-Green-Building-Label LEED (Leadership in Energy and Environmental Design, since 1996) emphasises the following aspects (here shown for the example of new buildings):

- Sustainable Sites (open space, parking etc.)
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality (Ventilation, Low-Emitting Materials; Thermal Comfort, Daylight etc.)
- Innovation & Design Process (additional commitment of the project team towards sustainability).

The social dimension and also emotional aspects have not been considered until recently.

The American "Green Building Council" (see organisational structure in attachment 1), the committee that coordinates, both nationally and internationally, the activities in the field of valuation systems, recently expressed the desire to conduct research in social and emotional issues (see whitepaper by Pyke et al., 2010).

Great Britain
Great Britain introduced the label BREEAM in the field of valuation systems in1990. It considers

- the environmental influence of the facility management
- health and wellbeing (heating, ventilation etc.)
- energy
- transport
- water
- material und waste disposal/recycling
- consumption of land and
- ecology as well as pollution

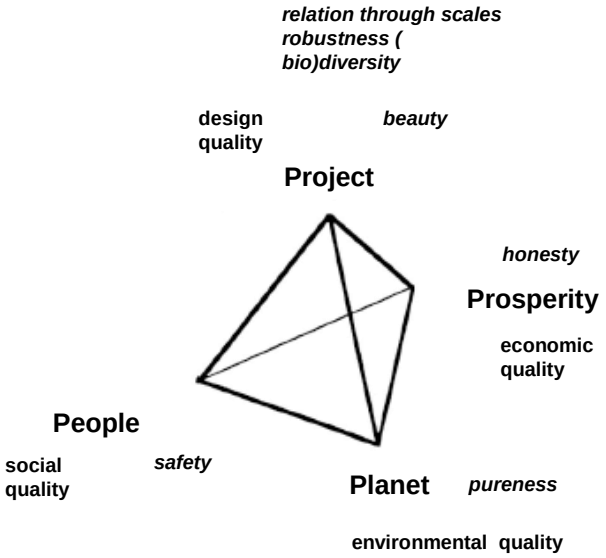
for different types of buildings.

The social, cultural and emotional aspects are also not considered in depth.

The Netherlands

Kees Duijvestein worked out in 2004 the so called "4P Tetraeder", where 4P stands for "Project, Prosperity, People, Planet". Of importance here is his indication of beauty and design quality, with which he integrates the emotional and cultural aspects of space planning in his model.

" Durzaam bouwen" has got different meanings : robustness, comfort, health of the residents, reliability of the materials, the integration of the building in its site… "Durzaam bouwen" is composed of the design quality of the project (longevity) accompanied by social qualities (social mix, participatory design, transports), by economical qualities (prosperity, profitability, eco-management) and by global environmental qualities (natural resources, biodiversity, water management, fight against greenhouse effect etc). The representation of Durzaam bouwen is a tetrahedron called the "4P": PROJECT, PROSPERITY, PEOPLE, PLANET (Duijvestein K., 2004)



From: Henry, Eric & Paris, Magali: Institutional dynamics and barriers to sustainable construction in France, the United Kingdom and the Netherlands, in: Symes, Martin & Cooper, Ian (ed): Sustainable Urban Development, Vol. 4 Changing Professional Practice, London 2009, S. 178

Figure 15: 4P-model (Henry et al., 2009).

France

"CRESSON" is the name of a research group in France, which recognised early on the importance of an over-all (with all sensory organs) perception of space that is deepened through research. Thereby it moved the term "Ambiance" or space atmosphere in the centre of interest and in the last years has built a bridge to sustainable space development. The group was established 1979 at the architectural school of Grenoble, and was first occupied with the "Espace sonore" and –becoming more and more interdisciplinary since 1991 – with space atmosphere.

Concerning the French labels, since 1995 the label of HQE (Association pour la Haute Qualité Environnementale), has existed. This evaluates 14 dimensions in four sections, differentiated into types of buildings ("Bureaux, Commerce, Santé, Hôtellerie" etc.):

- Site and construction
- Management (dealings with energy, water etc.)
- Comfort (thermical, acoustic and visual – understood as conduction of light and visibility, related to odour) and
- Health (air, water etc.).

The social and emotional aspects have not been considered up to now.

In 2010 HQE, together with important branch associations like ADEME (Agence de l'Environnement et de la Maîtrise de l'Energie, in existence since 1990), SNAL (Le Syndicat National des Aménageurs Lotisseurs, in existence since 1980) etc. launched the "Démarche HQE-Aménagement". It addresses 17 issues in three areas:

- To ensure integration and coherence of buildings related to districts: context, density, traffic and access, history, landscape, identity, ability of development
- Protection of natural resources and support of the quality of environment and health: water, energy and climate, material and equipment, waste disposal, ecological system and biodiversity, natural and technical risks, health
- Support of a social life of proximity and strengthening of the economic dimension: profitability of the project, functions, atmosphere and public space, integration and education, attractiveness/economic dynamic and local embedding.

Germany

In the model of the German DGNB ("Deutsches Gütesiegel Nachhaltiges Bauen") sustainability is not only regarded in a physical sense (space, building), but also in a socio-cultural sense (society and cultural sphere). The rating matrix of DGNB, which was published as a vision in 2008 for new office and administration buildings, contains 15 criteria related to the aspects of interest, where

- eight treat health, comfort and satisfaction of users (from the thermic over the visual comfort to safety/risks of incidents),
- five refer to functionality (accessibility, efficiency of surface, ability of conversion and biking comfort) and
- two affect the design quality (guarantee the quality of design and urban planning in the competition as well as art at the building).

Six dimensions are mentioned with regard to the aspect of the location quality. For the topic of the emotional and cultural aspects of the social dimension of sustainable development, the following are relevant:

- relations to the micro-location
- image and state of location and districts
- connection to traffic and
- proximity to use-specific facilities.

Switzerland

The Swiss government and the cantons prioritise sustainable space development which is demonstrated in high research activity. As an example the Federal Office of Spatial Development "ARE" developed in 2007 a research concept 2008-2011 for sustainable spatial development and mobility. In 2009 the Federal Office published a fact sheet with the title "Evaluating projects according to the principles of sustainable development". Regarding the social and cultural aspects of sustainable development five dimensions are listed:

- to support health and security of human beings
- to ensure development, identity of individuals
- to support culture, social values and resources
- to ensure equality of rights, legal security, equality
- to support solidarity within and generations.

In reviewing the numerous research projects of the Swiss Federal Institute of Technology Zurich ETHZ as well as of Universities, it is apparent that the discussion is once more dominated by the ecological and economical dimensions of sustainable development.

However, in Switzerland the social dimension is also discussed with increasing frequency in scientific papers. Recently, Dieter Pfister presented a study about the emotional aspects of the social dimension of sustainable development and pointed out that one cannot talk of social sustainability before the local atmosphere is positive and life-affirming, which requires proximity to certain target groups. Therefore when emotional needs are involved, "the society" has to be structured, because as is generally known design solutions, which should please everyone do not convince anyone, but rather support an arbitrary design, which may allow flexibility in inner places but little identification in the outer space. Identification and integration are therefore additional central norms of the social sustainability of construction.

A positive sustainable effect is always based on a personality (individual, institutional) and shows a high quality in relation to the existing spatial and human surroundings, which as a result leaves, over time, a good and also emotionally strong impression. Therefore the notion of quality itself has to be spatialised: Space quality is defined by the atmosphere.

As the following Figure 16 shows, different levels of qualities can be differentiated. To aim at a holistic attitude, the levels of the mental-emotional and the spiritual-verbal need to be considered more. Those dimensions, which relate to the above mentioned gaps of most evaluation systems, are marked red.

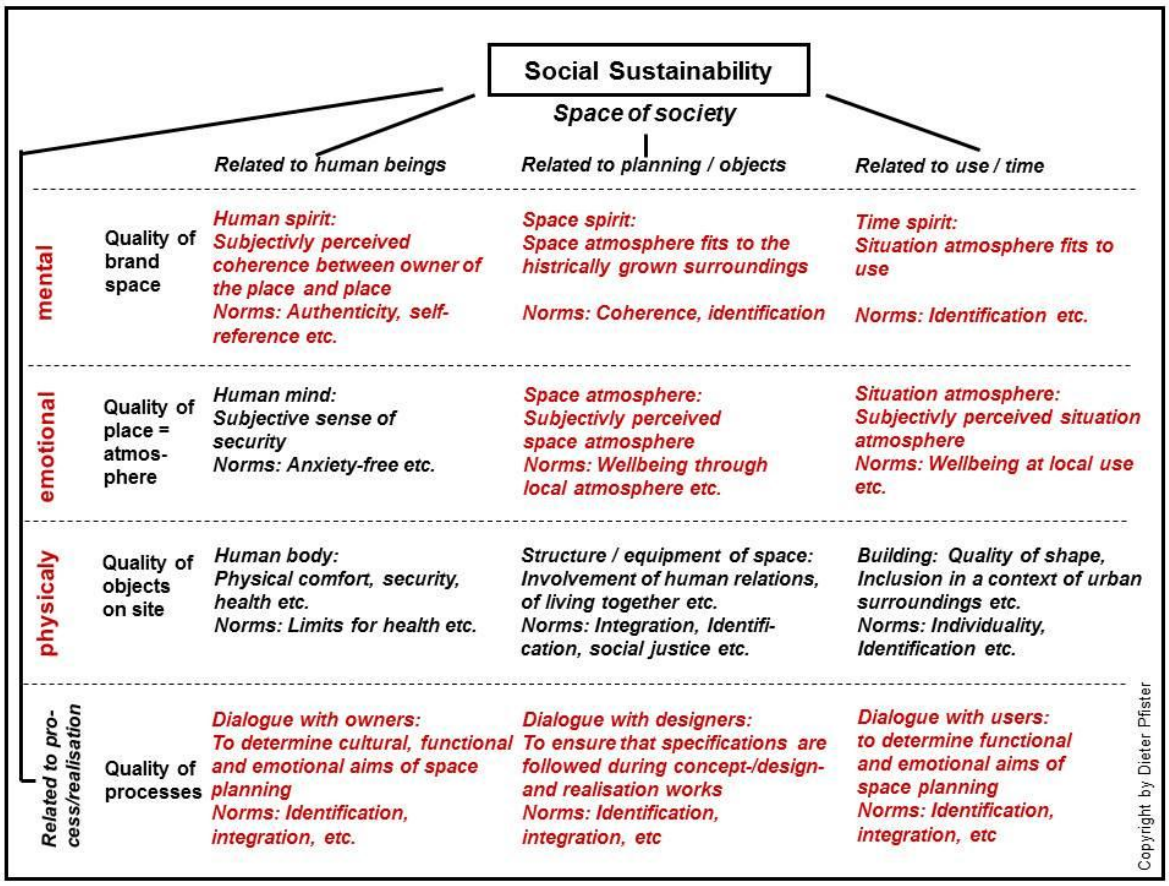


Figure 16: dimensions, qualities, indicators and norms of social sustainability in the building field (after Pfister, 2010a).

Since 1998 the quality label "Minergie" has been in use, which involves new buildings and modernised old buildings of all categories. The Minergie-standard focuses on the rational utilisation of energy and the broad use of renewable energies by the simultaneous improvement of quality of life, security of competitiveness and reduction of environmental pollution. Social and cultural aspects are not yet considered.

Since 2010 the Swiss Society of a sustainable real estate industry ("Schweizer Gesellschaft für nachhaltige Immobilienwirtschaft") SGNI, has existed which, in cooperation with the DGNB, is developing a Swiss seal of approval.

Appendix A4.2 Sustainable events in general

Events are temporal limited offers, which include spatial activities that are conceptualised for a specific audience. It can be differentiated between:

- activities realised by individuals or groups in a closed, private set (birthday party e.g.)
- events organised by institutions for own purposes (workshops of a bank e.g.), where rooms are rented to realise - more or less public - events or
- events organised by institutions for non-commercial and commercial purposes (sport events, party meetings, congresses, music festivals e.g.), especially events organised by destinations and institutions for their guests.

First of all it needs to be pointed out that in the appropriate literature; the topic of sustainability of events is treated clearly less important than the one of sustainable building. Especially in the context of big sport events, criteria were developed and evaluations made. For example a charter of sustainability exists for UEFA Euro 2008, which was binding for the environment ministers of Austria and Switzerland.

The BSI (British Standard Institution, London) developed in 2007 the BS 8901 standard for "Sustainable Event Management", which contains among other things, the identification with and the commitment of the stakeholders and communication. The already mentioned Global Reporting Initiative GRI worked out indicators for the "Event Sector", in the year 2010. These should be available in 2011.

In Austria (2005) and Germany (2008) the federal ministries for environment (in Austria called "Lebensministerium") composed guidelines for the environmentally compatible organisation of events. The Austrian guideline lists following topics concerning conferences: (Bundesministerium für Land- und Forstwirtschaft etc., today called Lebensministerium, 2005):

- management of waste disposal
- procurement
- energy and climate
- mobility
- food
- water
- accessibility
- gender mainstreaming
- hotel business / conference places
- fringe events
- documentation and communication
- presents for the guests.

In Switzerland the research institute for leisure and tourism (FIF) at the University of Berne wrote in several publications about the cultural and emotional aspects of sustainable effects of events. Hans-Ruedi Müller pointed out the concept of the experience-setting (Müller, 2009a), which assumes that experiences can be provoked by happenings or at least benefit them. Under setting we understand a scene or a situation. Deduced from an evaluation of the success factors of leisure parks, he mentions following production instruments for designing an experience setting. (Müller, 2004):

- topic
- staging concept
- attractions and activities
- scenery
- visitor guidance
- feel good management
- visitors/guests.

Appendix A4.3 Handling the social and cultural dimension of sustainable development in tourism

After this general overview of the social and cultural dimensions of sustainable space planning and events, it is necessary to analyse the state of thinking and action in tourism. There are countless studies regarding the social and cultural impacts of tourism that cannot be discussed here more deeply. However, on the level of a specific branch the same situation can also be seen: There are significantly fewer analyses of criteria and indicators of the social and cultural dimension of sustainable development than of the ecological and economical.

As an example, for a really sustainable point of view the "Global Sustainable Tourism Criteria" (started in 2007 with the guidelines for the screening and support of sustainability of tourism suppliers and consumers) can be mentioned The Global Sustainable Tourism Criteria (GSTC) are divided into four chapters:

A Demonstrate effective sustainable management
B Maximize social and economic benefits to the local community and minimize negative impacts
C Maximize benefits to cultural heritage and minimize negative impacts
D Maximize benefits to the environment and minimize negative impacts

In the following Table 23, the relevant criteria of the GTSC which cover social and cultural aspects are presented.

Global Sustainable Tourism Criteria		
Aims	***Destination***	***Institution***
A . *Demonstrate effective sustainable management..*	*A.7. Information about and interpretation of the natural surroundings, local culture, and cultural heritage is provided to customers, as well as explaining appropriate behavior while visiting natural areas, living cultures, and cultural heritage sites..*	*A.6. Design and construction of buildings and infrastructure:* *A.6.1. comply with local zoning and protected or heritage area requirements;* *A.6.2. respect the natural or cultural heritage surroundings in siting, design, impact assessment, and land rights and acquisition;;* *A.6.3 se locally appropriate principles of sustainable construction;* *A.6.4 provide access for persons with special needs.*
B. Maximize social and economic benefits to the local community and minimize negative impacts.	*B.5. A code of conduct for activities in indigenous and local communities has been developed, with the consent of and in collaboration with the community.*	*B.1. The company actively supports initiatives for social and infrastructure community development including, among others, education, health, and sanitation.* *B.4 The company offers the means for local small entrepreneurs to develop and sell sustainable products that are based on the area's nature, history, and culture (including food and drink, crafts, performance arts, agricultural products, etc.).*
C. Maximize benefits to cultural heritage and minimize negative impacts.	*C.2. Historical and archeological artifacts are not sold, traded, or displayed, except as permitted by law.*	*C.1. The company follows established guidelines or a code of behavior for visits to culturally or historically sensitive sites, in order to minimize visitor impact and maximize enjoyment.* *C.3. The business contributes to the protection of local historical, archeological, culturally, and spiritually important properties and sites, and does not impede access to them by local residents.* *C.4 The business uses elements of local art, architecture, or cultural heritage in its operations, design, decoration, food, or shops; while respecting the intellectual property rights of local communities.*

Table 23: The relevant criteria, from: www.sustainabletourismcriteria.org, under "The criteria"

Regarding Switzerland it is worthwhile to mention the quality certification system known as the "Capricorn label" that has existed since 1998 on a national level. It has been obtainable since 2009 simultaneously with the quality seal of approval of Swiss Tourism level III. Among other criteria, the label lists the following in the short test for accommodation companies/establishments under "Regional and Transport" as well as "Social":

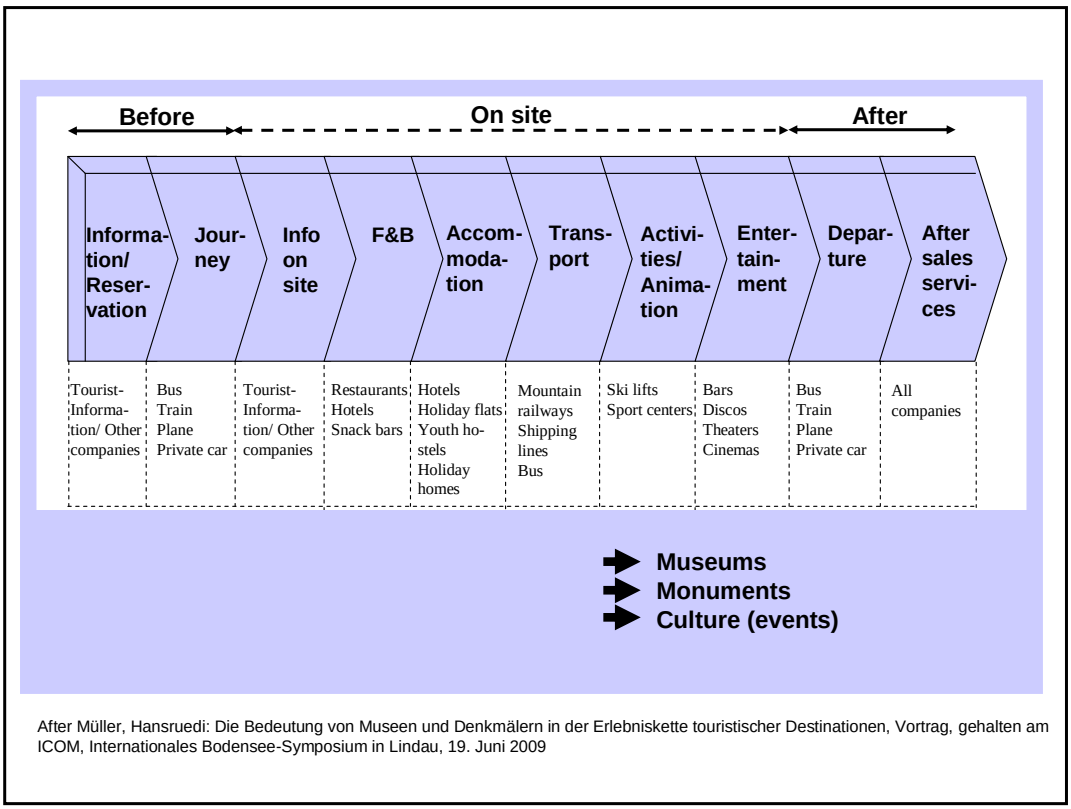
- Furnishings and equipment are mostly made out of regional material and regional production.
- We offer on our menu several regional specialities.
- At least half of the staff with contact to guests are able to speak the regional language.
- We inform our guests about events with regional cultural content.
- The wages of all our employees are independent of gender.
- Restaurant (incl. toilets) and lobby are wheelchair-accessible.
- Suppliers are also chosen with regard to social criteria.

Appendix A4.3.1 Social/cultural sustainable space planning/atmosphere in tourism

After this short and general overview of the state of discussion in sustainable tourism, it is the time to look for the specific concepts of social and cultural sustainability in touristic space planning.

Level destination

In his considerations regarding the relevance of museums and monuments for touristic destinations, in the following Figure 17 Hansruedi Müller presents, their position in the value chain. It could be added that when the chain is seen as a continuum of life space, that all these destinations are embedded into landscapes: "nature" and "architecture" interact, which is another criteria for sustainability (ambiance, matching).



After Müller, Hansruedi: Die Bedeutung von Museen und Denkmälern in der Erlebniskette touristischer Destinationen, Vortrag, gehalten am ICOM, Internationales Bodensee-Symposium in Lindau, 19. Juni 2009

Figure 17: The positioning of museums, monuments and culture within the value chain, (after Müller 2009b)

Level company/establishment
Jürg Stettler et al. (2003) proposed stagings and worlds of experience and adventure to profile Swiss mountain railways. Stettler instrumentalised their staging, collected data on the relevance of the instruments on the side of the users and showed how diverse the possibilities are. These reflections are important, when indicators should be developed from the relevant criteria. The following success factors quoted by Stettler are relevant: (Stettler et al., 2003):

- Customer orientation
- Thematisation
- Visitor guidance
- Design and architecture.

Dieter Pfister's (2004) research into sustainable communication and authentic space planning at historic hotels is shown in chapter 4 of Pfister (2004).

Appendix A4.3.2 Social/cultural sustainable events in tourism

This chapter looks at the events conceived and organised by destinations and their companies/ establishments for the purpose of leaving a sustainable impression and with the aim to increase the attractiveness of the location. There is also little literature and few standards in existence on this topic.

Level destination
Hansruedi Müller (2004) describes the procedure towards conscious experience-staging in twelve steps of which some are of interest in the context of sustainability (Müller, 2004):

- To define areas of staging: five locations are in the centre (arrival and departure, accommodation/hotel, place/image of the village, sights, landscape, excursions).
- To create a scene: to reduce unfriendliness, dirt, noise, etc.; use interaction between human beings as a source of emotions: quality of service; quality of hardware (cleanliness): To create for the guest an aesthetic alternative world.
- To guide the visitors: To ensure information and orientation; to avoid crowding; to consider dramaturgy, change of tension and relaxation; to avoid boredom especially in long queues; Creation of enigma, to generate curiosity.

These considerations are already near the interfaces to the indicators for social/cultural sustainable events.

Level company/establishment/hotel
The same considerations already described on the level of destinations (Müller, 2004) are also relevant here. There is a lack of studies for companies/establishments.

Appendix A4.4 Proposal for criteria and attributes

Criteria contain the "what" and are described here by attributes (characteristics of offers). They serve the purpose of sustainable development and can be operationalised for practice through indicators which describe the "how" and must be formulated that way that the question of "How well the objective is fulfilled" can be answered (measurability).

In 2004 Dieter Pfister outlined quality criteria and indicators for historic hotels and in 2007 for space planning. They were subsequently used in numerous projects, especially in the evaluation of historic hotels in which they proved themselves to be useful. These criteria are the following:

- Credibility
- Authenticity
- Experience
- Local fitting
- Functionality
- Level of finishes
- Originality
- Honesty
- Compassion
- Continuity
- Quality of service

These criteria can at the same time be regarded as qualities of a brand space, because brand theory is always adjusted to a sustainable effect, to continuity (self-reference) which is developed when activities and space planning are deduced in the longer term from constant brand values.

All these criteria give a profile to places and events. The sustainable effect can be described by the long term positive ability of making space and events memorable. In the best case they are unforgettable experiences. A place is also regarded as a brand-personality that shows the personality of the place-owner (credibility, authenticity), and produces by continuity a self-reference and by high quality of materials and manufacture, a specific atmosphere.

Finally the attributes of space planning/atmosphere and events on the levels of destinations and establishments can be defined as a bridge between the above mentioned Global Sustainable Tourism Criteria and their indicators. The following Table 24 shows the result of these reflections.

Where What	**Destination/ company/establishment**	**Sustainable space planning/atmosphere and events**
Dimension	Criteria	Attributes, specific description of criteria
Cultural and emotional characteristics of space	**Credibility**	The image of the place/space/event fits the image that is communicated by the destination/company: The present and targeted image correspond.
	Authenticity	The place/event is authentic. The values of human beings are inherent in their work, their appearance and their offers; People have the courage to be themselves.
	Experience	The place/event stays as an experience in a longer remembrance because it pleased all senses and touched guests. The experience can be full of action but also of silence and offers possibilities of withdrawal/privacy.
	Local fitting	The place/event fits to the surroundings, integrates local human beings and media as well as cultural, creative and natural traditions of everyday and high culture.
	Functionality	The place/event is conveniently "furnished" (clear orientation for guest/visitors accessibility for disabled etc.).
	Level of finishes	The place/event has a very high quality of manufacture of the elements (creation of the pedestrian area, hotel rooms, sustainability of topics/ content of events).
	Originality	The place/event is original, does not copy trends.
	Honesty	The place/event does not present false facts (at the material/ treatment of surface/artificial aging, at the competence of speakers / artists, at the self-representation and image cultivation, at the handling with criticism etc.).
	Compassion	The place/event maintains the details, treats carefully interesting objects or activities but at the moment of little use, especially human beings (health, equality, social responsibility also towards employees and local providers etc.).
	Continuity	The place/event integrates at a new space planning good fitting in existing objects.
	Quality of service	The place/event stands out due to competent, friendly, attentive staff and informs them and the guests continuously and honestly about present and future offers.

Table 24: Proposal for criteria and attributes of sustainable space planning / atmosphere and events of touristic destinations and establishments

Appendix A5 : Social Attributes

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Appendix A5.1 Introduction

The ecological dimension of sustainability has been discussed for some time, and nowadays these issues are already included in management education. Within the sustainability debate, aspects of quality were a focus for enterprises during the 1980s, and the challenge of ecological sustainability came up in the 1990s. More recently, since the turn of the millennium aspects of social responsibility have also been examined which has led to a rise in awareness of the issue. Even if the two approaches of sustainable development and Corporate Social Responsibility (CSR) are becoming closer, the debate on sustainability is still focussing on the whole society, whereas the approach of Corporate Social Responsibility remains on an organisational and stakeholder level (Christen, 2009 and Curbach, 2009). The definition of CSR varies as CSR is nowadays a widely discussed topic. The World Business Council for Sustainable Development gives the following basic characterisation: CSR "is the continuing commitment given by business organizations to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large" (World Business Council for Sustainable Development, 1999).

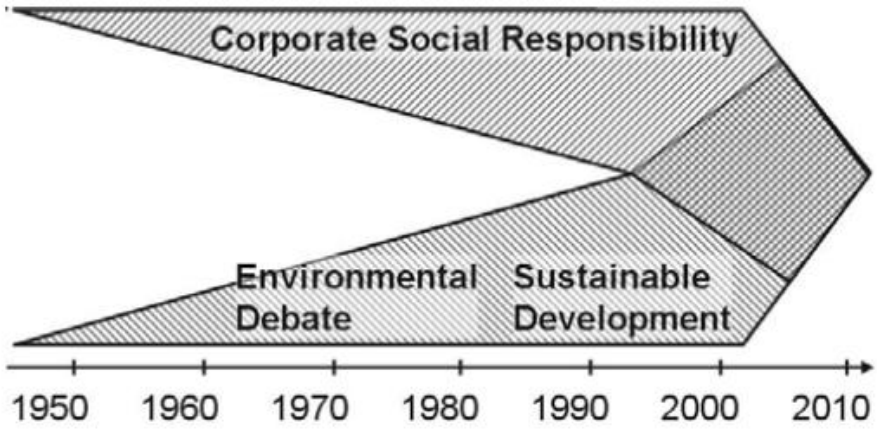

Figure 18: Die Corporate-Social-Responsibility-Bewegung (Curbach, 2009)

However, the focus is still often on ecological indicators, which are more easily measureable, whereas it is much more difficult to visualise indicators for the social dimension of sustainability and make them measureable. Indeed, lately a growing discussion about the societal impacts of tourism has taken place. With regard to the social attributes of sustainability it is always important to consider the regional, or rather the local, context. Therefore the political as well as the social environment always has to be regarded where social attributes should be implemented. The desk research for the field of societal and social issues has shown similar strategies as the ecological dimension: strategies are based on regional and sector defined aspects. Comparable elements could be found, although there is still a need for a coherent classification for all fields and attributes of sustainability.

The findings of the literature review for the formulation of social attributes are presented below. The examined instruments, classification and initiatives are all individually structured, thus they have a different range of coverage, depending on their focus or rather their purpose. Whereas the ISO norm and the GRI guidelines are not sector-specific and globally oriented, there are also some other instruments which are, for example, especially developed for the hotel business as well as few on a national basis. As the WTO has already counted over 100 global voluntary initiatives for sustainable tourism in a study (Wight, 2007) and CRS initiatives in the tourism sector often tend to be informal (Smith, 2003), the presented instruments and initiatives below do not give a complete view of those that exist. The objective was the formulation of descriptive attributes for sustainable tourism from the social point of view. On the basis of those results, the design for the questionnaire "WTFL-Study Understanding Sustainability" was developed, which is generally based on more general aspects. It was important to develop a clear, conceptual approach for an implementation in different countries.

Appendix A5.2 Desk research

Desk research based on literature and internet research was conducted to get a survey of existing work and established labels and standards on the topic of Sustainable Development and Corporate Social Responsibility and to further develop the questionnaire concerning social attributes on Sustainability. This review makes no claim to be complete, as there is nowadays a vast amount of published (online and printed) articles, guidelines, handbooks as well as standards and labels.

a. ISO 26'000

ISO, the International Organization for Standardization, published voluntary guidelines for social responsibility for all kind of companies and organisations (concerning their size and location) in 2010 as ISO 26000. It is not providing requirements, thus it is not a certification standard. The ISO 26000 aims to encourage voluntary commitment to social responsibility and will lead to common guidance on concepts, definitions and methods of evaluation. The need for organisations in both the public as well as private sector to behave in a socially responsible way is becoming a generalised requirement of society.

The guidelines of the ISO 26000 were developed by the leader of the ISO Working Group on Social Responsibility, the Swedish Standards Institute together with the Brazilian Association of Technical Standards. Stakeholders of the industry, government, labour, consumers, nongovernmental organisations and others (considering geographical and gender based balance) participated in the working group[66].

b. Global Reporting Initiative Guidelines (GRI)

The Global Reporting Initiative is organised as a network-based community. It has the aim of developing a sustainability reporting framework; and due to its pioneering work, is now in fact the world's most widely used guideline, and is still being continuously improved in a perpetual process. A high commitment is ensured through the participation of different actors from business, civil society, labour and professional institutions on an international level. Its goal is to broaden the application of its reporting framework and to increase awareness of sustainability[67].

[66] http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/social_responsibility/sr_discovering_iso26000.htm; [20100825]
[67] www.globalreporting.org; [20100825]

c. Global Sustainable Tourism Criteria (GSTC)

The Global Sustainable Tourism Criteria consists of 37 voluntary standards, which gives the minimum level any tourism business should fulfil to show awareness of the responsibility of the worlds environmental and cultural heritage as well as the possibility of alleviating poverty. The GSTC was set up at the World Conservation Congress in October 2008.

The internet tool Sustainable Tourism Gateway is member of the GSTC and provides easy and fast access to information and networking on sustainable tourism and related topics[68].

d. Responsible Tourism in destinations: The Cape Town Declaration 2002 (CTD)

Visions and future scenarios of the implementation of sustainability measures in the tourism sector have been evolved. The aim is that the principles included are used on a small scale level; which means they should be implemented at all levels of tourism, from the family business to the global player. As an example, the guiding principles for social responsibility are described in chapter three below[69].

e. Global Code of Ethics for Tourism (GCET)

The Global Code of Ethics for Tourism sets sustainable development in a new context and points out human aspects of sustainability. Inspired by several declarations and standards, it regards and strengthens aspects of current developments and changes to society. As there is a rising number of tourists expected in the future, the GCET aims to minimise the negative impacts of tourism on natural and cultural resources and at the same time to maximise the benefits received in the tourism destinations[70].

f. International Labour Organisation

The International Labour Organisation (ILO) was established by the League of Nations with the primary aim to safeguard world peace on the basis of social justice. Nowadays it supports the effort in the promotion of opportunities for women and men for working conditions of freedom, equity, security and human dignity. Fundamentally, it advances the rights in the working environment, encourages respectable employment opportunities, upgrades social protection and strengthens dialogue in handling work-related issues. The ILO consists of representatives from governments as well as employers and employees from more than 150 different nations (Curbach, 2009).

In promoting social justice and internationally recognised human and labour rights, the organisation follows its founding mission that labour standards are essential to wealth. The International Labour Organisation implemented the ILO Declaration on Social Justice in the work. It aims to support and raise the awareness of the social dimension of globalisation. As the understanding of social aspects is quite different nowadays on a global level, commitment to those aspects is needed.

[68] http://www.sustainabletourismcriteria.org/; http://www.gdrc.org/uem/eco-tour/eco-tour.html; [20100825]
[69] http://www.gdrc.org/uem/eco-tour/st-codes.html; [20100825]
[70] http://www.unwto.org/ethics/; http://www.unwto.org/ethics/principles/en/principles.php; [20100827]

For the ILO the actions of Social Protection include a set of policies and programmes which aim a reduction of poverty and vulnerability "by promoting efficient labour markets, diminishing people's exposure to risks, and enhancing their capacity to protect themselves against hazards and interruption or loss of income: it is essential to enable people to live without excessive fear of the consequences of misfortune" [71] . Also if not all countries can implement all aspects of social protection, some basic elements should be applied also in less developed countries. Because it supports income security, health care, education, food security, unemployment protection, access to water, sanitation and housing which affects the development of the country positively[72].

The ILO Decent Work Agenda is working under the main topic of fair globalization, which has in focus the "economic growth as well as equity through a mixture of social and economic goals" ([73]). To achieve this goal, activities are divided into four groups: Employment, Dialogue, Rights and Protection.

The Global Extension of Social Security (GESS) is a global knowledge sharing platform for the promotion of social security, which is introduced and runned by the ILO Social Security Department. It aims to give support for the exchange of information and ideas, to collect and document experiences, to detect knowledge gaps and in the same time to generate new knowledge and promote innovation. For the implementation of these objectives the GESS implements participatory methods. Due to the fact that social security is well acknowledged basic human right, "GESS provides assistance, information and collaborative tools to all those working towards universal social security coverage"[74].

g. The Corporate Social Responsibility Process of the European Union

Since the European Union started their work on the topic, much progress has been made on CSR since the Lisbon Council made its appeal to companies' sense of social responsibility in March 2000. A Green Paper (2001), a Communication (2002), and the setting up of an EU Multi-Stakeholder Forum on CSR (CSR Forum) marked important steps in this process. The CSR Forum brought together representatives of business, trade unions and civil society, with the Commission in a facilitating role (Curbach, 2009).

A common European understanding of what CSR means has been formed on the basis of the Commission definition of CSR as a "concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis"[75]. The CSR Forum confirms this definition while it is further developing its scope and boundaries. The Forum has also reached consensus on the need for further awareness-raising and competency-building activities. Awareness, understanding and the uptake of CSR have improved over the past few years, partly as a consequence of the CSR Forum and other actions supported by the Commission[76].

The vision of the EU is to further develop and promote the implementation of CSR strategies by European enterprises. Also the role of employees himself, but also expressed through representatives and their trade unions, should be strengthen more in the future. Other stakeholders, as NGOs,

[71] http://www.ilo.org/public/english/bureau/pardev/download/relations/newsletter-12.pdf; [20100827]
[72] http://www.ilo.org/global/lang--en/index.htm; http://www.socialsecurityextension.org/gimi/gess/ShowMainPage.do; [20100825]
[73] http://www.globalreporting.org/NR/rdonlyres/B52921DA-D802-406B-B067-4EA11CFED835/3880/G3_IP_Labor_Practices_Decent_Work.pdf; [20100827]
[74] http://www.socialsecurityextension.org/gimi/gess/ShowWiki.do?wid=9; [20100826]
[75] http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/index_en.htm; [20100825]
[76] http://ec.europa.eu/enterprise/policies/sustainable-business/index_en.htm; [20100826]

consumers and investors should as well be involved in the application of CSR. On an international level the EU aims to keep its role of a pioneer in this field and therefore "European companies should behave responsibly wherever they operate, in accordance with European values and internationally agreed norms and standards"(Commission of the European Communities, 2006).

h. Sozialaudit SA 8000 TÜV Rheinland

The SA 8000 Standard is a concept which defines the social responsibility of employees, suppliers, customers and society. The objective of the concept is Sustainable Development and the establishment of a worldwide valid certification and control system for every single business. It differs from ISO through systematic questioning of the employees and the inclusion of external stakeholders, such as labour unions and non-governmental organisations[77].

Despite the relevance for the tourism sector there is no known application of the SA 80000 within a tourist business.

i. Questionnaire PROOFIT

Proofit is a project of the *Schweizer Netzwerk für nachhaltiges Wirtschaften* (Swiss network for Sustainable Economic Management) and is a Think-Tank on topics of Sustainability and Management with approx. 350 business members. *Efficheck* is an online questionnaire for small and medium-sized enterprise to find out their level and potential in the field of sustainable management[78].

j. Feasible Measuring System for Sustainability in the Tourism Sector (MSST)

Christian Baumgartner (2001) introduced a feasible measuring system for sustainability in the tourism sector. He especially mentioned socio-cultural and institutional fields as measured criteria. As an institutional frame, regular reporting of responsible persons in contact with guests, businesses and civil society is needed. Also, open access to information about the current situation and measures in the field of sustainability in the tourism sector belongs to the frame (Baumgartner, 2001).

k. The challenge of tourism carrying capacity assessment: theory and practice (TCCA)

A research team around Coccossis (2001) of the Greek University of the Aegean tried to work out the indicators for the tourism carrying capacity within European tourism. Social aspects which influence the local society out of the social and socio demographics fields are included in this research. Examples are the existing manpower or rather educated employees. However, socio-cultural questions are also considered, in terms of the sense of identity of the local population. Some of these attributes could be expressed quantitatively, whereas most of them need to be approached qualitatively. Barriers of social carrying capacity are the most difficult to define in comparison to ecological and economic barriers (Coccossis et al., 2001).

[77] http://www.tuv.com/de/deutschland/gk/managementsysteme/nachhaltigkeit_csr/sa8000_1/sa8000.jsp; [20100825]
[78] http://www.proofit.ch/; [20100827]

l. Guideline CSR Reporting in the tourism industry (GCSR)

An example of the implementation of the Corporate Social Responsibility Reporting initiative within the tourism industry is the *forum anders reisen e. V.* Together with the association of tourism enterprises *forum anders reisen e.V.* and five pilot enterprises, a reporting system was developed. The target group is the LOHAS sector, (Lifestyles of Health and Sustainability) and the main CSR issue is the implementation of economic, social and ecological targets within the business strategy. As a result, transparency in communication and balance in the consideration of the different interests of the stakeholders (employees, customers, suppliers, shareholders, neighbours and others) should be created.

Members of the *forum anders reisen e.V* .consider that for the planning and realisation of their travels the increasing cultural differences between travellers and the locals should be considered. The ILO Core Labour Standards are integrated within the criteria of *forum anders reisen e.V.*[79].

m. Fairunterwegs

Fairunterwegs is a working group on the topics of tourisms and development. More and more tourism enterprises support social projects in holiday destinations – primarily in child relief projects, schools and nursery schools – which could be effectively used for marketing purposes. They offer facts and background information in terms of development politics for different holiday destinations and living conditions of the domestic population, as well as links to relief organisations and support for the exchange of experience of travelling[80].

n. Charity Travel Thailand

The Beluga School for Life Charity is a tour operator which takes charge of all touristic issues of the relief project and creates exciting activities outside the mass tourism sector. All the income which is generated through accommodation, catering and activities, goes directly into the project. The goal is to transfer the Beluga School for Life into a self-supporting organisation. The hotel area is also a training school for the youth of the project and the region, which gives them a chance to enter the labour market of the future[81].

o. Ecotourism, CSR, and the fourth dimension of sustainability

A study by The World Bank (Smith, 2003) of several industries, such as manufacturing and agribusiness revealed that the tourism sector was the least developed in terms of CSR initiatives and rules of conduct. It seems that the tourism industry is more into marketing effective eco-friendly approaches. Even though the tourism sector is slow to adopt these approaches, some companies are adopting sustainable development as a management framework to build long-term value in line with shareholder and societal expectations. The number of companies which have taken a lead in CSR is even smaller. As there are a huge number of voluntary initiatives, their success will basically depend on their institutional setting. Therefore there is possibly a need for a better integration of voluntary approaches (as CSR) into government regulation and other measures. As the concept of sustainable tourism goes far beyond environmental protection, it should consider six areas; empowerment of employees, economic performance, ethics, equity, education and environmental performance (Wight, 2007).

[79] http://forumandersreisen.de/index.php; http://www.kate-stuttgart.org/content/e1533/index_ger.html; [20100823]
[80] http://www.fairunterwegs.org/; [20100823]
[81] http://www.charity-travel-thailand.de/; [20100823]

p. Public Understanding of Sustainable Tourism

In the study of Miller et al. (2010) a survey of 62 people in England showed that there is a low level of awareness of the environmental and social impacts of the tourism industry. The existing awareness was mostly concerned tangible impacts such as littering. The interviewed persons see the responsibility on the governmental side to address the problem of sustainable tourism. The author concludes that the challenge is to develop a sense of personal responsibility for the impacts developed by taking holidays. A solution is seen in labelling, carbon calculation and a creation of priority lanes for boarding planes for those who have offset their emissions. Also the encouragement of behavioural change through physical and virtual networks is proposed as a possible solution (Miller et al., 2010).

q. Labels for the Tourism Industry

Altogether approximately 70 labels for tourism exist in Europe. Most of them mainly consider ecological aspects and are focused on the certification of hotels. Due to the number of existing labels it gives little help (Sohmer, 2007). Well known labels are:

- EU Flower (eco-label of the European Union)
- Blue Flag (eco-label for beaches and marinas with stringent standards)
- Ibex Label (for hotels as well as for hostels)
- Tourcert "CSR-tourism-certified" (label for sustainability and corporate responsibility in the tourism sector)

Appendix A5.3 Core Subjects for Social Responsibility

The presented standards, guidelines, handbooks and literature above deal more or less with the same topic. However, they differ quite a lot in their field of action; being based on a micro or national level up to an international radius. They also vary in their level of detail, which has made the task of merging them into one list more difficult. Below, the section *Labour Practices (3.2)* is separated from the section *Human Rights (3.1)*, even though some of the attributes are included in Human Rights. As those attributes are targeted on an individual level for employees, the topics of *Respect for the Needs and Traditions of the Local People (3.3)* and *Community Involvement and Development (3.4)* have their focus on a societal level. The section *Communication and Awareness Raising (3.5)* also includes the outgoing society as a target group of social responsibility.

Appendix A5.3.1 Human Rights

- Family-friendly policies (PROOFIT)[82]
- Principle of equal opportunities / prohibition of racial, gender, religious etc. discrimination (PROOFIT, SA 8000; MSST, GCSR, ILO)
- Social diversity (PROOFIT)
- Participation of employees (PROOFIT)
- Implementation of a policy against commercial exploitation, particularly of children and adolescents (including sexual exploitation or forced labour) (GSTC, CTD, SA 8000, CSR, ILO)
- Equitably in hiring women and local minorities (including in management positions) (GSTC)

Appendix A5.3.2 Labour Practices

- Training and further education for employees (PROOFIT, GSTC, MSST, GCSR)
- Health and Safety in the workplace (PROOFIT, GESS)
- Staff and labour turnover (PROOFIT)
- Respect of (inter)national legal protection of employees (GSTC)
- Tourism as a vehicle for individual and collective fulfilment (GCET)
- Rights of the workers and entrepreneurs in the tourism industry (GCET)
- Limitation of job insecurity as far as possible (GCET)
- Social Protection (GCET)
- Flexible organisation of working time (PROOFIT)
- Freedom of association, of organisation in labour unions and collective wage negotiation (SA 8000, ILO)
- Maximum working time of 48 hours per week, one day off included (SA 8000)
- Guarantee of a wage which covers all living costs (SA 8000, GCSR, GSTC)
- Consistency with existing documents, international treaties and conventions and existing ISO standards (ISO 26000)

[82] The abbreviations refer to the references of the subjects presented in chapter 3.
a= **ISO 26'000** (http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards /social_responsibility/sr_discovering_iso26000.htm)
b= **GRI** Global Reporting Initiative (http://www.globalreporting.org/ReportingFramework/ReportingFrameworkDownloads/)
c= **GSTC** Global Sustainable Tourism Criteria (http://www.sustainabletourismcriteria.org/index.php?option=com_content&task=view &id=58&Itemid=188)
d= **CTD** The Cape Town Declaration (http://www.gdrc.org/uem/eco-tour/cape-town-delcaration.html)
e= **GCET** Global Code of Ethics for Tourism (http://www.unwto.org/ethics/principles/en/principles.php)
f= **ILO** International Labour Organisation (http://www.ilo.org/declaration/principles/freedomofassociation/lang--en/index.htm)
h= **SA 8000** (http://www.tuv.com/de/sa_8000.html)
i= **PROOFIT** (http://www.proofit.ch/de/infothek/detail-info/?tx_infomodule_pi2%5Buid%5D =785&cHash=fa6664c2b4)
j= **MSST** Measuring System for Sustainability in the Tourism Sector(Baumgartner 2001)
k= **TCCA** Tourism Carrying Capacity Assessment (Coccossis 2001)
l= **GCSR** Guideline CSR (http://forumandersreisen.de/content/dokumente/csr-leitfaden_mit_umschlag.pdf)

Appendix A5.3.3 Respect to the Need and Traditions of the Local People

- Respect cultural, societal, environmental and legal differences and economic development conditions (ISO 26000, GCET)
- Support for local small entrepreneurs to develop and sell sustainable local and traditional products (including food and drink, crafts, performance arts, agricultural products, etc.) (GSTC)
- Code of Conduct for activities in indigenous and local communities has been developed (GSTC)
- Involvement of the local community in planning and decision-making (CTD, GCSR)
- Assessment of social impacts throughout the life cycle of the operation in order to minimise negative impacts and maximise positive ones (CTD)
- Access for all to the benefits of tourism, in particular vulnerable and disadvantaged communities and individuals (CTD)
- Sensitivity to the host culture, maintaining and encouraging social and cultural diversity (CTD, GCSR)
- Tourism activity should consider traditional cultural products, crafts and folklore to stay alive and rather develop (GCET)
- Involvement of the local population into the Tourism activities should be permitted to share gained economic, social and cultural benefits (GCET)
- Awareness of the number of tourists and type of activity which could be absorbed of the host destination without losing their sense of identity, their way of life and social patterns (TCCA)

Appendix A5.3.4 Community Involvement and Development

- Support of initiatives for social and infrastructure community development (GSTC)
- Local residents are employed (also in management positions) (GSTC)
- Local and fair-trade services and goods are purchased (GSTC)
- The activities of the company do not jeopardise the provision of basic services, such as water, energy, or sanitation, to neighbouring communities (GSTC)
- Small and medium sized enterprises should have access to the tourism sector (GCET)
- Tourists should prefer local and owner-led hotels, which fulfil environmental and social standards (GCRS)

Appendix A5.3.5 Communication and Awareness Raising

- Increase confidence and satisfaction in organisations among their customers and other stakeholders (ISO 26000, GCSR)
- Contribution to improvements in health and education (CTD)
- Broaden awareness of social responsibility (ISO 26000)
- Promote common terminology in the social responsibility field (ISO 26000)
- Tourism's contribution to mutual understanding and respect between peoples and societies (GCET)
- Outward documentation via certification (SA 8000, MSST, GCSR)
- Provision of practical guidance, identifying and engaging with stakeholders, and enhancing credibility of reports and claims made about social responsibility (ISO 26000)

Appendix A5.4 Conclusion

The appraisal of the desk research showed that there are basically three groups of subjects which are important for the creation of social attributes of sustainability. The different attributes we found in the desk research are grouped into three parts: Aspects of "Human Rights" focus on the rights of an individual such as an employee or members of different minority groups. The second group, "Respect for the Needs and Traditions of the Local People", regards the target communities in the tourism destinations. The last point, "Community Involvement and Development", considers the outgoing tourism group where there is the need for awareness raising. Also, if the practical implementation of social responsibility within the tourism industry takes place in the target areas or within companies, the awareness and acceptance of the consumers is needed for its realisation in practice.
In our opinion the big challenge in the field of societal attributes in sustainable tourism is to standardise the existing targets, guidelines, suggestions and labels, and thus to develop a common base for a quantification of attributes. On the other hand, regional, or rather local, aspects should be considered. The basis of societal attributes of sustainability is the support for the recognition of social responsibility. The requirement of the successful implementation of the targets in the field of societal attributes is the identification and the engagement of stakeholders, because multi-stakeholder dialogue is "an essential vehicle for cohesive and sustainable change"[83]. For the definition of criteria of and targets for sustainable development, and especially for societal aspects of this, it is important to consider local aspects. Even though the main goal is to develop minimum international standards, developing countries are not comparable with the industrialised countries of Europe or North America. It is important to point out, that the definition and the creation of common targets cannot substitute their implementation. Also, they could and should support the creation of social knowledge, connections and inspiration for meaningful action. For that reason it makes sense to involve local people in the creation of regional and local targets and actions, as argued by Baumgartner (2001) as well as Hoffmann (2006). Only if the targets of sustainability are embedded in existing planning processes and control systems, as well as in formal and informal hierarchies and current sensitive issues, could compliance to the targets be achieved. Further it should be considered that from the worldwide point of view there is a big difference in political priorities and targets. But there is also a huge gap in the present awareness and knowledge on the topic, as well as the differing impact of relevant stakeholders, which means that this issue is not treated with the same level of priority within different countries and regions of the world. Therefore, the target should be to develop a common but also flexible and adaptable guideline for the implementation of social attributes of sustainable development on a worldwide scale. For that reason the criteria for single core areas should be adaptable to different countries and regions, so that the implementation of them is a realistic target for stakeholders.

[83] http://www.ilo.org/fairglobalization/lang--en/index.htm; 20110314

Appendix A6 The basic products and a screen capture of a choice set

The following screen captures show the basic offer of the Safari in South Africa (see Figure 19) and the beach holidays in the Maldives (see Figure 20) as offered by Kuoni. The last Figure 21 shows a screen capture of the online survey with a representative choice set.

KUONI

SÜDAFRIKA › GEFÜHRTE RUNDREISEN

Giraffe

Diese Rundreise führt Sie durch die einzigartigen Landschaften Südafrikas, beginnend im Norden des Landes, im berühmten Krüger Nationalpark und weiter durch Swaziland und den Hluhluwe Nationalpark, entlang der bezaubernden Gardenroute bis zum Kap der Guten Hoffnung. Übernachtungen ausschliesslich in 4-Stern Hotels.

IHR REISEPROGRAMM

1. TAG: JOHANNESBURG › PRETORIA › (ca. 150 km) Am Flughafen werden Sie von Ihrer deutsch sprechenden Reiseleitung begrüsst. › HIGHLIGHT: Willkommen in Südafrika

2. TAG: PRETORIA › KAPAMA › (ca. 550 km) Heute fahren Sie in Richtung Nordosten in die Provinz Mpumalanga. Nachmittags können Sie bereits an einer ersten Pirschfahrt teilnehmen. (F/M/N) › HIGHLIGHT: Auf Pirsch

3. TAG: KAPAMA › Bereits frühmorgens gehen Sie auf Pirschfahrt und kehren zu einem ausgiebigen Frühstück in die Lodge zurück. (F/M/N)
› HIGHLIGHT: Auf den Spuren der Big 5

4. TAG: KAPAMA › WHITE RIVER › (ca. 500 km) Am heutigen Tag fahren Sie der beliebten Panoramaroute mit ihren atemberaubenden Ausblicken entlang. (F)
› HIGHLIGHT: Panoramaroute

5. TAG: WHITE RIVER › SWAZILAND › (ca. 350 km) Die Reise führt Sie heute in das kleine Königreich Swaziland, unterwegs besuchen Sie ein traditionelles Swazi Dorf. (F/M)
› HIGHLIGHT: Swaziland

6. TAG: SWAZILAND › HLUHLUWE › (ca. 400 km) Die Fahrt geht weiter in Richtung Indischer Ozean. Sie unternehmen eine Bootsfahrt im iSimangaliso Wetland Park (ehemals St. Lucia) und können mit etwas Glück zahlreiche Flusspferde und Krokodile bestaunen. (F/N)
› HIGHLIGHT: Bootsfahrt im iSimangaliso Wetland Park

7. TAG: HLUHLUWE › Sie brechen heute Morgen bereits im Morgengrauen in den Hluhluwe–Umfolozi Nationalpark auf und verbringen den ganzen Tag auf Pirschfahrt. (F/M/N)
› HIGHLIGHT: Spitzmaulnashörner

8. TAG: HLUHLUWE › PORT ELIZABETH › (ca. 320 km) Fahrt nach Durban und kurze Stadtrundfahrt (zeitbedingt). Flug nach Port Elizabeth. (F/N)
› HIGHLIGHT: Durban

9. TAG: PORT ELIZABETH › GEORGE › (ca. 350 km) Heute besichtigen Sie den Tsitsikamma Park und das Monkeyland.
› HIGHLIGHT: Tsitsikamma Park

10. TAG: GEORGE › (ca. 120 km) Am Morgen besuchen Sie das Diaz Museum in Mossel Bay. Den Nachmittag verbringen Sie im kleinen Küstenstädtchen Knysna. (F)
› HIGHLIGHT: Gardenroute

11. TAG: GEORGE › FRANSCHHOEK › (ca. 550 km) Durch die kleine Karoo Wüste gelangen Sie ins Zentrum der Straussenzucht, nach Oudtshoorn, wo Sie eine Straussenfarm sowie die bekannte Tropfsteinhöhle Cango Caves besichtigen.
› HIGHLIGHT: Straussenfarm und Tropfsteinhöhle

12. TAG: FRANSCHHOEK › KAPSTADT › (ca. 170 km) Heute Morgen erkunden Sie das Weinland und besuchen eine Weinkellerei, danach fahren Sie in die Mutterstadt Kapstadt am Fusse des Tafelberges. (F)
› HIGHLIGHT: Südafrikanischer Wein und Tafelberg

13. TAG: KAPSTADT › (ca. 200 km) Am Morgen Besuch einer Diamantenschleiferei, danach geht die Fahrt entlang der spektakulären Küstenstrasse ans Kap der Guten Hoffnung.
› HIGHLIGHT: Kapstadt und das Kap der Guten Hoffnung

14. TAG: KAPSTADT › (ca. 30 km) Individuelles Anschlussprogramm oder Transfer zum Flughafen für Ihren Rückflug in die Schweiz. (F)

14 TAGE AB JOHANNESBURG BIS KAPSTADT

› Johannesburg › Pretoria › Kapama › White River › Swaziland › Hluhluwe › Port Elizabeth › George › Franschhoek › Kapstadt

IM PREIS INBEGRIFFEN

› Reise im klimatisierten Fahrzeug
› Flug Durban–Port Elizabeth
› Unterkunft gemäss Programm
› Mahlzeiten gemäss Programm: F=Frühstück, M=Mittagessen, N=Nachtessen
› Eintrittsgebühren für Besichtigungen und Ausflüge gemäss Programm
› Lokale deutsch sprechende Reiseleitung
› Preis– und Programmänderungen vorbehalten

Figure 19: Catalogue page with the safari in South Africa

1 Deluxe Villa
2 Standard Villa

****½

Reethi Beach Resort

BAA-ATOLL. «Reethi» bedeutet «schön» in der Landessprache der Malediven. Wenn schon die Einheimischen diese Insel so nennen, so muss sie dem Paradies ziemlich nahe kommen. Nur 15 Prozent ihrer Fläche sind bebaut, sie ist umgeben von unbewohnten Nachbar-Eilanden. Starten Sie Ihre eigene Robinsonade, gehen Sie auf Entdeckertour, suchen Sie sich Ihren ganz persönlichen Lieblingsplatz.

LAGE › Am nordöstlichen Rande des Baa-Atolls, umgeben von kleinen, unbewohnten Inseln. Die Insel ist 600 Meter lang und 200 Meter breit. **INFRASTRUKTUR** › 70 meist frei stehende Bungalows und 30 Water Bungalows über der Lagune verteilt. Hauptrestaurant, Grill-Restaurant, 2 Spezialitäten-RestaurantsA-la-carte-Restaurant/ Coffee-Shop (24-Std.-Betrieb), 4 Bars. Souvenirgeschäft und Boutique, Spa. Pool beim Sportzentrum und Poolbar.

UNTERKUNFT › *Standard Villa:* komfortabel eingerichtet, Open-air-Badezimmer mit Dusche/WC, Föhn; Klimaanlage, Deckenventilator, TV, Kühlschrank, Safe. Terrasse. **SPORT / WELLNESS** › *Ohne Gebühr:* Beachvolleyball, Tischtennis. *Gegen Gebühr:* Coconut Spa. Gut ausgestatteter Fitnessraum. 2 Tennisplätze mit Flutlicht, Squash, Badminton. Kanu, Katamaran, Bananenboot, Windsurfen, Wasserski, Kitesurfen, Fun Tube, Parasailing, Glasbodenboot, Schnorchelausrüstung, Tauchen.

BESONDERES › Bootsausflüge, Picknicktouren und Abendunterhaltung. Ein Arzt steht den Gästen 24 Std. zur Verfügung. **TRANSFER** › Flughafen–Resort: 125 km/ca. 35 Min. mit Wasserflugzeug

TAUCHEN › SPA › BARFUSSINSEL

KUONI
EXCLUSIVE

Angebot exklusiv bei Kuoni.

KUONI
INFO

Hausriff: nur 50 m entfernt
Spezialitäten: Korallengärten und Grossfische

Wellness
Das gemütliche Coconut Spa liegt direkt am Strand, mit einer Ruheterrasse und wunderschöner

Meersicht. 5 Behandlungsräume (Doppel-, Einzel-, Innen- und Aussenräume).

Figure 20: Catalogue page with the offer in the Maldives

Figure 21: Screen capture of a representative choice set

Appendix A7 Tables Choice Experiment "Maldives"

The detailed tables with the results from the choice experiment using the case of the Maldives are presented in this appendix. The most important differences compared to the case of South Africa are mentioned in section 4. These tables help the interested lecturer to obtain a more detailed impression of the results of the other choice experiment.

First, the preferences are presented, followed by the table with the results from the logit estimation and the table listing the marginal willingness to pay.

Appendix A7.1 Preferences

CO_2--Compensation

Total Respondents	2448
No CO_2--compensation	43.2%
CO_2--compensation	56.8%
Within Group Chi-Square	p < .01

Table 25: Preferences CO_2--compensation, Maldives

Local Products

Total Respondents	2448
Almost no local products	20.5%
Local food	37.7%
Local food and building materials	41.7%
Within Group Chi-Square	p < .01

Table 26: Preferences local products, Maldives

Environmental management

Total Respondents	2448
No measures	11.2%
Some measure	42.4%
A lot of measures	46.4%
Within Group Chi-Square	p < .01

Table 27: Preferences environmental management, Maldives

Fair working conditions

Total Respondents	2448
Unclear working conditions	19.7%
At least fair wages	36.3%
High international standards	43.9%
Within Group Chi-Square	p < .01

Table 28: Preferences fair working condition, Maldives

Appendix A7.2 Results from the logit model

Effect	t ratio	Attribute
Test for significance of the model: Chi-Square: 14172		
-0.04444	-8.90070	Price
-0.23305	-25.58490	CO_2--compensation
		Local products
0.26704	19.72160	Local food
0.47248	34.91990	Local food and building materials
		Environmental management
0.58240	42.78220	Some measures
0.75883	55.33260	A lot of measures
		Fair working conditions
0.19539	14.59180	At least fair wages
0.58518	43.38330	High international standards
0.09095	6.29910	None

Table 29: Results from the logit model, Maldives

Appendix A7.3 Marginal willingness to pay

Attribute	MWTP in CHF	MWTP in percent of price
CO_2--compensation	5.2	0.16%
Local products		
Local food	6.0	0.18%
Local food and building materials	10.6	0.32%
Environmental management		
Some measures	13.1	0.40%
A lot of measures	17.1	0.52%
Fair working conditions		
At least fair wages	4.4	0.13%
High international standards	13.2	0.40%
Total (sum of highest level of each attribute)	46.1	1.40%

Table 30: Marginal willingness to pay for selected attributes, Maldives

Appendix A8 Country Factsheets

The understanding of sustainable tourism, as presented in section 3, is discussed in the following appendices for all eight countries separately. Since the assessment of the attributes differs between the different countries, the figures regarding the agreement with the attributes (see Figure 1, Figure 2 and Figure 3) are presented in a different way. The attributes are always listed in the order of their introduction in section 2, as shown below in Figure 22, Figure 23 and Figure 24 for the whole sample over all countries.

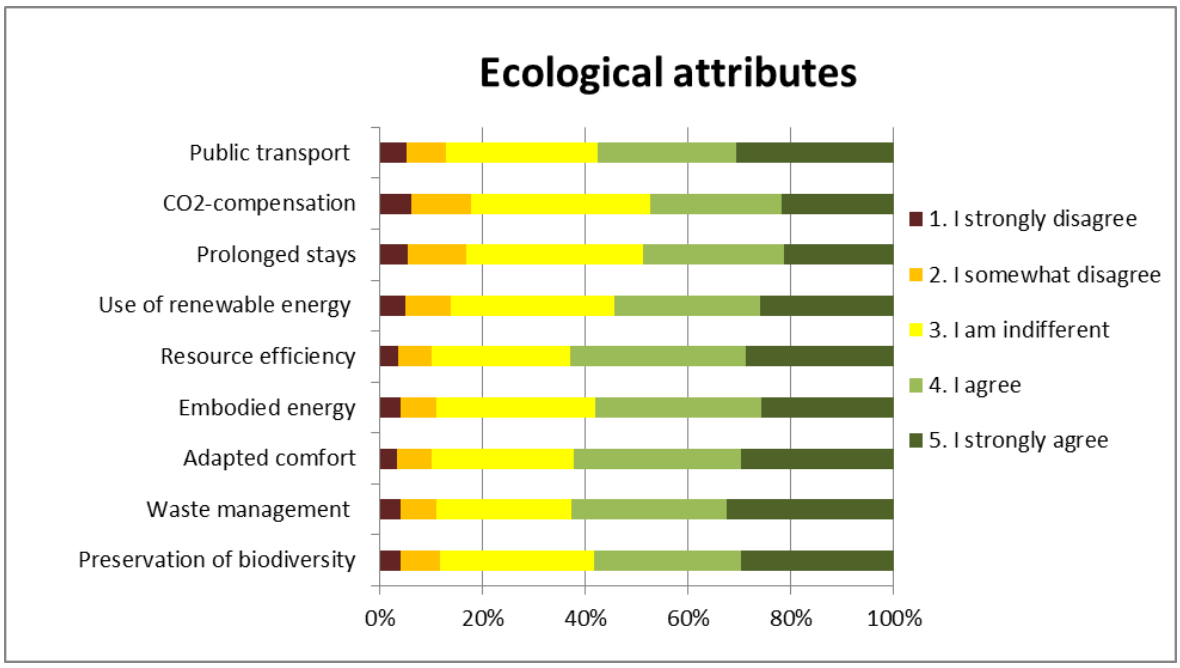

Figure 22: Ecological attributes of sustainable tourism products

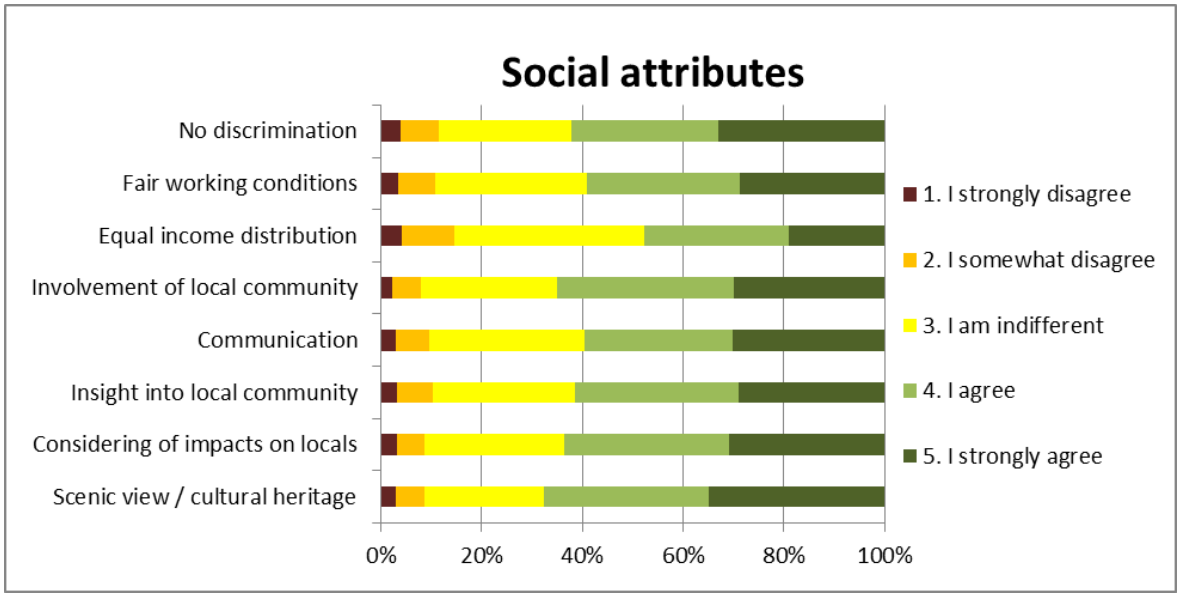

Figure 23: Social attributes of sustainable tourism products

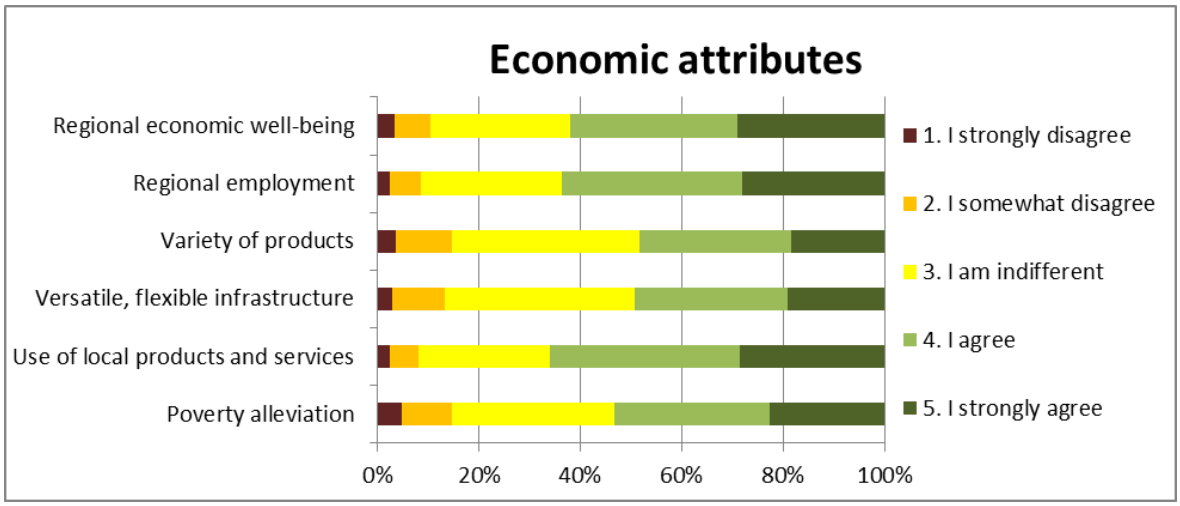

Figure 24: Economic attributes of sustainable tourism products

In the following, the particularities of each country are briefly presented, focusing on the decision to book a holiday, the distribution of the types of tourists, socio-demographics and the understanding of sustainable tourism.

Appendix A9 Factsheet western industrialized countries

Rank	Western industrialized countries	Overall
1	Weather / climate	Weather / climate
2	Price	Price
3	Local culture	Accessibility to and from the destination
4	Accessibility to and from the destination	Local culture
5	Landscape	Landscape
6	Food	Food
7	Local activities (sports, excursions, etc.)	**Sustainability**
8	**Sustainability**	Local activities (sports, excursions, etc.)

Table 31: Rating according to importance in decision to book a holiday in western industrialized countries

Excluding Brazil, India and Russia from the sample, and looking only at the western industrialized countries, Germany, Sweden, Switzerland, UK, and the USA, sustainability is ranked as eighth among the important factors that influence the decision to book a holiday, compared to a seventh rank in the overall ranking over all countries (see Table 31). Generally, the ranking does not change much due to the exclusion of Brazil, India and Russia. However, sustainability is among the top three influencing factors for only 15.2% of the respondents. This is lower than the 22% of the overall sample and it can be concluded that sustainability is less an issue in booking in western industrialized countries. This is driven by the selection of the sample and the higher share of well-educated and rich people in Brazil, India and Russia.

The distribution of the clusters in the western industrialized countries shows some specific characteristics: There are fewer people of the balanced type (28.8%) compared to the overall sample (32.6%), instead there are more of the sceptic type (29.3% vs. 25%). The cultural type is clearly less represented in the western European countries (11.5% vs. 15%); whereas the shares of the socio-economic and ecological types are more or less the same (see Figure 25).

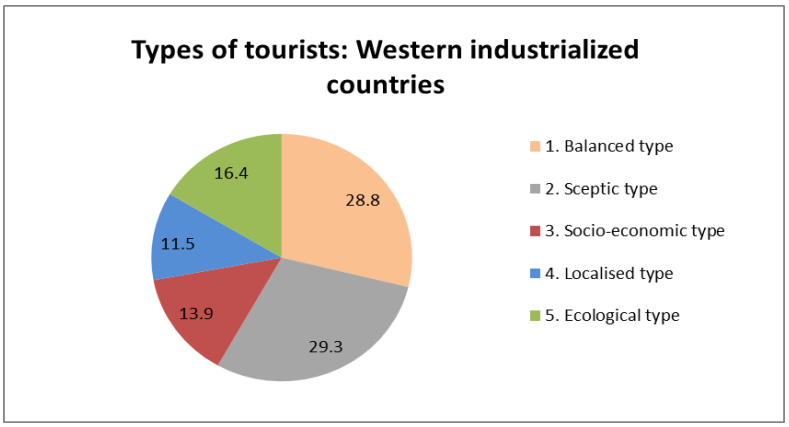

Figure 25: Types of tourists with respect to sustainability in western industrialized countries

24% of the respondents are aware of sustainable tourism products. This is much below the average over all the countries. The share of tourists from western industrialized countries who have already booked a sustainable tourism product is below the average of the overall sample, with only 11.4% already having booked such a product. Slightly more people (71.9%), normally book their holidays online.

Socio-demographic data

49.7% of the respondents are women. This corresponds with the result in the overall sample. Regarding the age structure, the different groups are quite equally represented. Slightly fewer respondents are from the 25-34 year old category (19.0%), instead more respondents from the 55-64 year old category have participated (22.1 %). More tourists with a middle level of education have participated: The share of this kind of respondents adds up to 35.5%. 55.0% of the respondents belong to the group with a higher level of education which indicates that there are fewer respondents of this group compared to the average in the overall sample. This can be explained by the fact that in this group of countries the middle class can afford to book holidays. In poorer countries, only the well-educated upper class with a higher level of income travels.

Understanding of sustainable tourism

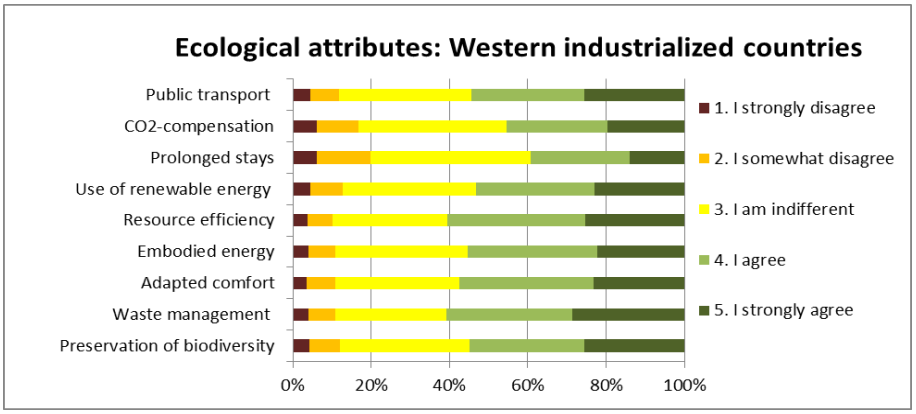

Figure 26: Western industrialized countries: Assessment of ecological attributes

In general, attributes of sustainable tourism are assessed more critically, with the highest deviation for the attribute “prolonged stay. The other attributes are all rated with 5 – 10% lower agreement rates (see Figure 26).

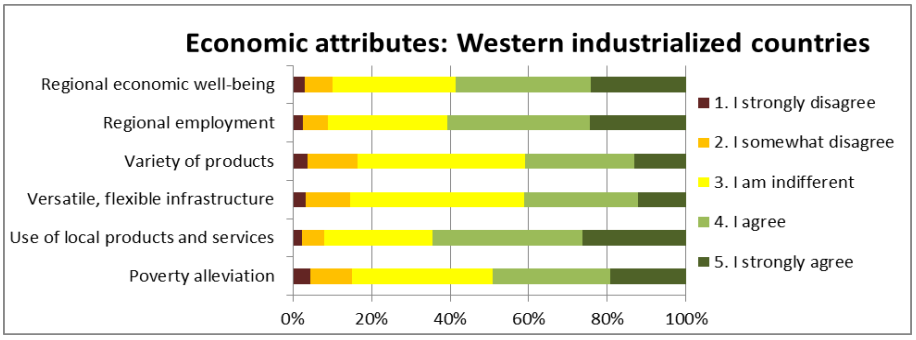

Figure 27: Western industrialized countries: Assessment of economic attributes

In the economic dimension the attributes “versatile, flexible infrastructure" and “variety of products" are clearly judged as particularly less sustainable. These two attributes have agreement shares that are ca. 10 percentage points lower compared to the shares in the overall sample. The other four attributes are judged a little more critically. However, the differences are not large (see Figure 27).

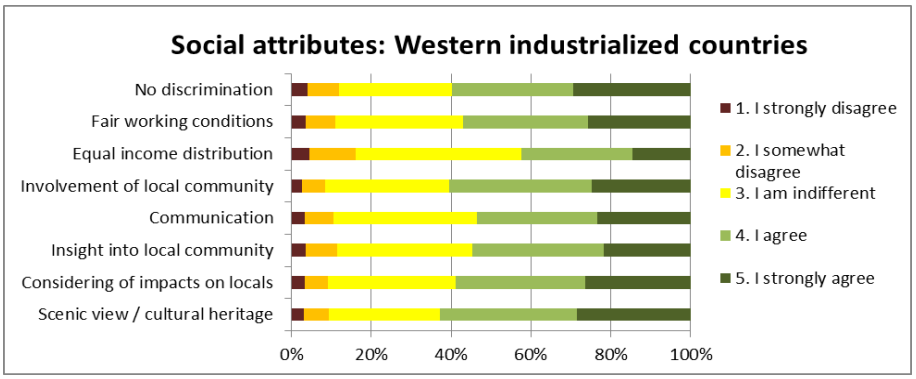

Figure 28: Western industrialized countries: Assessment of social attributes

Again, the social attributes are assessed more critically. The agreement shares of all attributes are lower by 5- 10 percentage points. The general distribution is the same and the same attributes are judged as most relevant as in the overall sample (see Figure 28).

Appendix A10 Factsheet Brazil

Rank	Brazil	Overall
1	Price	Weather / climate
2	Weather / climate	Price
3	Landscape	Accessibility to and from the destination
4	Accessibility to and from the destination	Local culture
5	**Sustainability**	Landscape
6	Local culture	Food
7	Food	**Sustainability**
8	Local activities (sports, excursions, etc.)	Local activities (sports, excursions, etc.)

Table 32: Rating according to importance in decision to book a holiday in Brazil

Sustainability is much more important in the decision to book a holiday in Brazil than in the sample over all countries, as it is among the top three influencing factors in the decision to book a holiday for 36.1 % of the respondents in Brazil. It is estimated that this value is so high because a lot of the respondents belong to the group of people with a higher level of education. Sustainability is ranked as fifth (see Table 32).

More than one half of the respondents (51.1%) belong to the balanced type in the Brazilian sample (see Figure 29). This share is very high compared to the share of 32.6% in the overall sample over all countries (see Figure 4). The share of the sceptic type, which is normally the second most important type, is very small (only 9.6%). However, there are surprisingly many tourists belonging to the ecological type (22%).

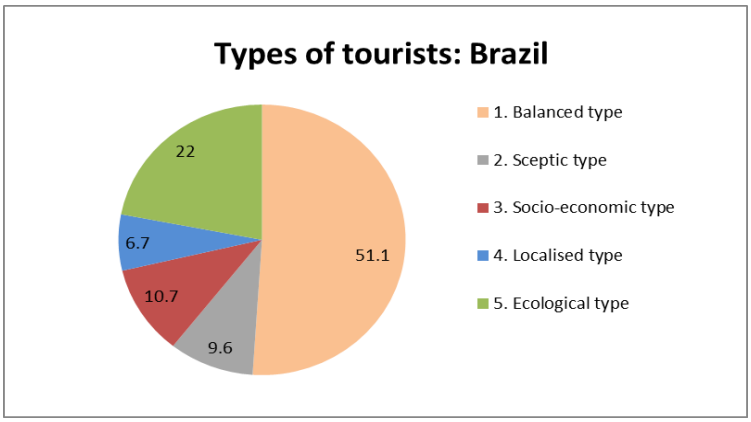

Figure 29: Types of tourists with respect to sustainability in Brazil

42.9% of the Brazilian respondents are aware of sustainable tourism products, which is above the average. Brazil is also above average for the share of tourists who have already booked a

sustainable tourism product with 28.8% already having booked such a product. This can be explained by the high share of people are aware of sustainable tourism products. Furthermore, more respondents than the average also stated that they normally book their vacations online (77.2%).

Socio-demographic data

42.8% of the respondents are women. Hence, there are slightly fewer women compared to the average. Regarding the age structure, it is noticeable, that there are more people from the 25-34 year old category. This might be caused by the better access to the internet and the better knowledge related to the internet. Furthermore, primarily people with a higher level of education (84.7%) and a middle level of education (11.9%) are represented in the Brazilian sample. Hence, there are many more respondents with a higher level of education and much fewer with a middle level of education in the Brazilian sample. Regarding income, there are more respondents with a high income (54.6%), because going to holiday is still a privilege for the class with a higher income level and higher level of education.

Understanding of sustainable tourism

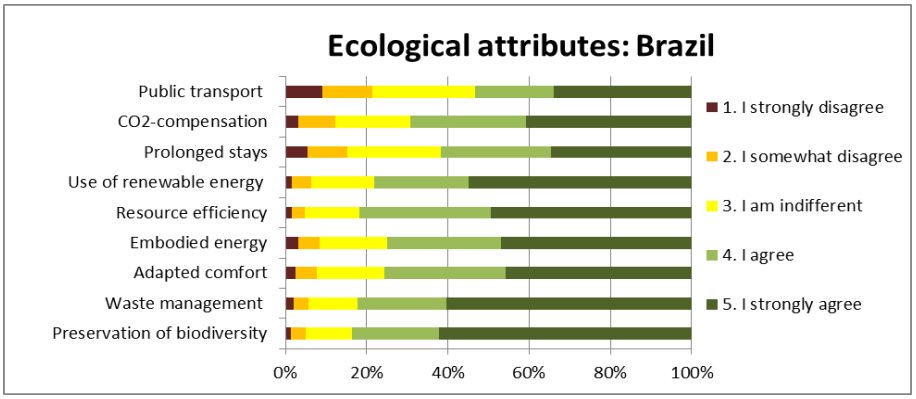

Figure 30: Brazil: Assessment of ecological attributes

Brazilians are not critical of the proposed ecological attributes (see Figure 30) and the share of respondents agreeing is much larger than in the average over all countries, where it is typically around 60%. The only two attributes that have a lower rate of agreement are "public transport" and "prolonged stays".

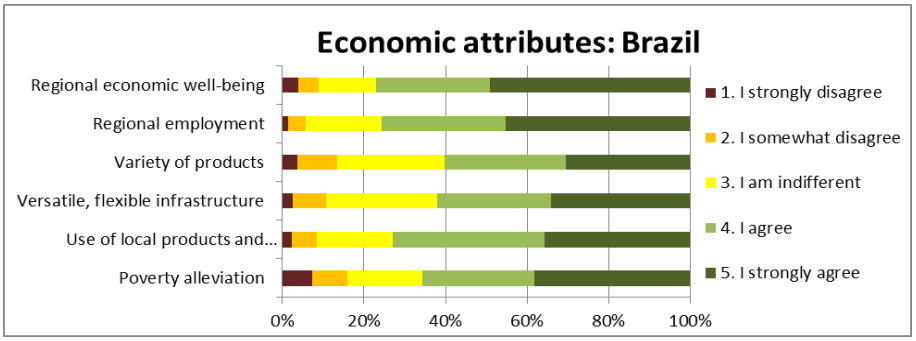

Figure 31: Brazil: Assessment of economic attributes

The less critical assessment also considers economic attributes (see Figure 31). “Regional economic well-being”, “regional employment” and “use of local products and services” are especially assessed much more often as sustainable.

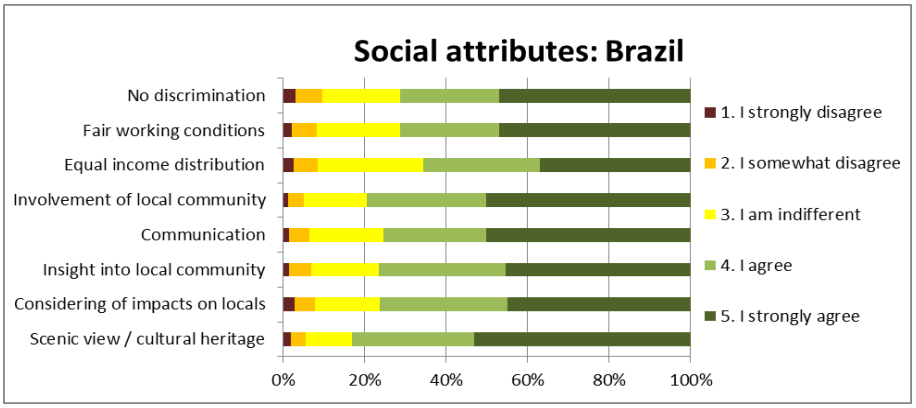

Figure 32: Brazil: Assessment of social attributes

Furthermore, the social attributes are assessed as sustainable by significantly more respondents in Brazil compared with the average over all countries (see Figure 32). “Scenic view / cultural heritage” is the highest rated attribute as in the overall sample.

Appendix A11 Factsheet Germany

Rank	Germany	Overall
1	Local culture	Weather / climate
2	Weather / climate	Price
3	Landscape	Accessibility to and from the destination
4	Accessibility to and from the destination	Local culture
5	Food	Landscape
6	Price	Food
7	**Sustainability**	**Sustainability**
8	Local activities (sports, excursions, etc.)	Local activities (sports, excursions, etc.)

Table 33: Rating according to importance in decision to book a holiday in Germany

Sustainability is ranked as seventh among the important factors that influence the decision to book a holiday, as in the overall ranking over all countries (see Table 33). However, sustainability is among the top three influencing factors for 16.8% of the respondents. Interestingly, local culture is ranked first and price only sixth, which differs greatly from the average over all the countries.

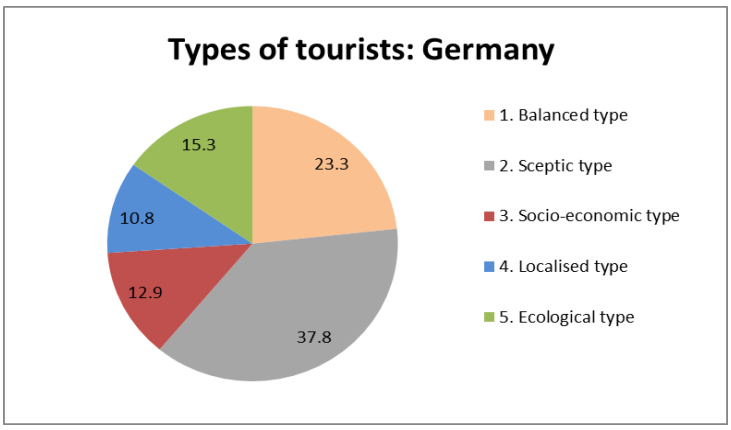

Figure 33: Types of tourists with respect to sustainability in Germany

The largest category of tourist type is ‘sceptic’, (see Figure 33) with a share of 37.8%. This is clearly above the average of 25% over all countries. Consequently, the share of the ‘balanced’ type (23.3%) and the share of the ‘localised’ type (10.8%) are clearly lower compared to the average over all countries. The shares of the other two types are practically identical to the overall distribution.

34.2% of the German respondents know sustainable tourism products. This correlates with the average over all countries. Germany is below average for the share of travellers who have already booked a sustainable tourism product with only 14.5% already having booked such a product. Furthermore, only 55.7% of the Germans stated that they normally book their vacations online. This is much lower compared to the overall sample.

Socio-demographic data

48.4% of the respondents are women. This corresponds with the result in the overall sample. Regarding the age structure, more older people are included compared to the overall sample. Only 16.4% of the respondents are from the 25-34 year old category, which is less in than the average. Instead, more tourists from the 65-74 year old category have participated. Many more tourists with a lower or middle education level have participated: The share of respondents with a low level of education adds up to 19.5%, and the share of respondents with a middle level of education is 40.4%. Hence, the share of respondents with a higher education level is much smaller at 40%. This is also reflected in the distribution of income: There are more people with low income (15.7%) and less people with higher income (39.4%) compared to the average. This can be explained by the fact that in Germany also people with lower income and lower education level have access to the internet and have enough money to travel compared to people in less developed countries.

Understanding of sustainable tourism

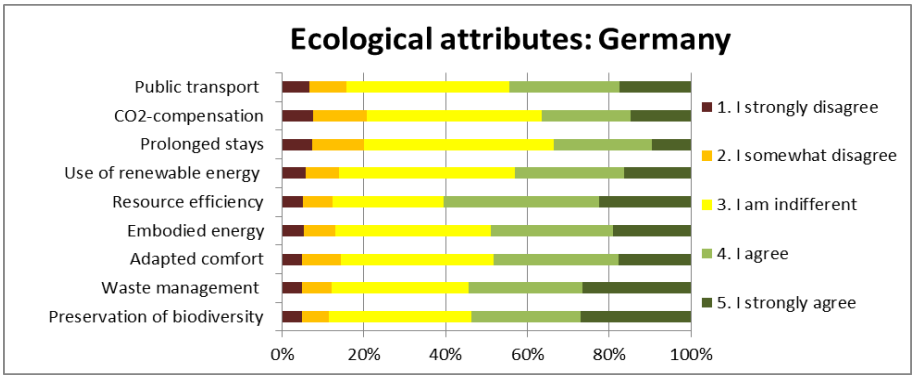

Figure 34: Germany: Assessment of ecological attributes

In general, Germans assess the attributes of sustainable tourism much more critically, with "resource efficiency", "no discrimination" and "upkeep of the scenic view / cultural heritage" being the most important criteria. Within the ecological attributes, only "resource efficiency" was rated at a comparable level to the average rating over all countries. It is the most important factor in the environmental dimension, followed by "waste management" and "preservation of biodiversity". All other attributes, and especially "prolonged stays "and "CO2-compensation", clearly have lower shares of respondents who are in agreement or strong agreement. (see Figure 34).

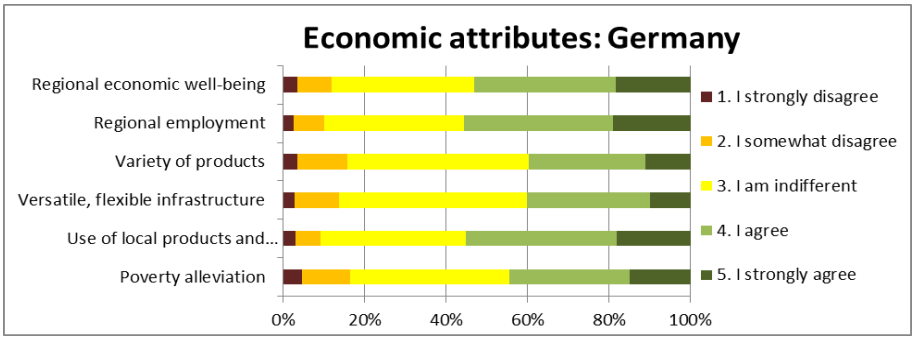

Figure 35: Germany: Assessment of economic attributes

The critical assessment also considers economic attributes (see Figure 35). The attributes “versatile, flexible infrastructure" and “variety of products" are clearly judged as particularly less sustainable. In the economic dimension “regional employment" is perceived as most sustainable, followed by “use of local products and services” and “regional economic well-being”.

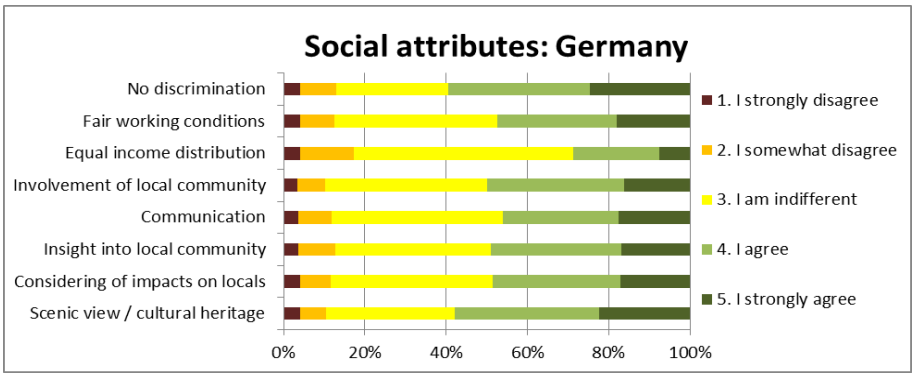

Figure 36: Germany: Assessment of social attributes

Again the social attributes are assessed more critically. “Equal income distribution" in particular was assessed much lower, with a value of ca. 20% fewer people agreeing or strongly agreeing. The other attributes have values of ca. 10-15% fewer people agreeing or strongly agreeing (see Figure 36). Two of the three attributes seen as most sustainable belong into this dimension.

Appendix A12 Factsheet India

Rank	India	Overall
1	Weather / climate	Weather / climate
2	Price	Price
3	Accessibility to and from the destination	Accessibility to and from the destination
4	**Sustainability**	Local culture
5	Food	Landscape
6	Landscape	Food
7	Local culture	**Sustainability**
8	Local activities (sports, excursions, etc.)	Local activities (sports, excursions, etc.)

Table 34: Rating according to importance in decision to book a holiday in India

Sustainability is among the top three influencing factors in the decision to book a holiday for 41.3% of the respondents. Similarly, sustainability is ranked as fourth among the important factors that influence the decision to book a holiday (see Table 34) and is therefore more important than in the overall ranking of all countries (rank 7). Interestingly, local culture is ranked better, which also holds for Brazil, another country where sustainability is ranked better (see Appendix A10). However, price is still the second most important factor.

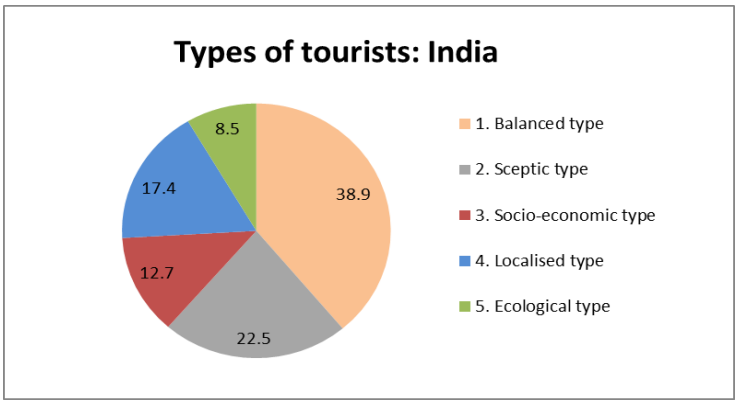

Figure 37: Types of tourists with respect to sustainability in India

The largest category of tourist type is ‘balanced’ in India, (see Figure 37) with a share of 38.9%, which is a deviation from the sample from the point of view of percentages, where the share is 32.6%; however it is not a deviation in the sense that the balanced type is the largest group. Interestingly, the sceptic and the localised type have relatively high shares, and the ecological type (8.5%) is much smaller compared to the overall sample (15.1%).

59.9% of the Indian respondents are aware of sustainable tourism products, which is clearly above the average over all countries. India is also much above average for the share of travellers who have already booked a sustainable tourism product, with 48.6% already having

booked such a product. Furthermore, 73.0% of the Indians state that they normally book their vacations online. This is a higher share compared to the overall sample.

Socio-demographic data

Only 35.1% of the respondents are women. Regarding the age structure, much more of the respondents are from the 25-34 year old category (35.9%). There are also more from the 35-44 year old category (30.9%) compared to the average over all countries. Consequently there are fewer respondents from the categories above 45 years old. The proportionally higher share of young people can be explained by the fact that fewer old people have access to the internet. The same holds for the very high share of respondents with a high level of education (95.9%) and consequently the much lower share of people with a middle level of education (4.1%) and the non-representation of people with a low level of education. Compared to the good level of education in the Indian sample, it is surprising that the share of people with a higher income (39.8%) is lower compared to the average over all countries and there is still a high share of respondents with a low level of income (16.5%). This is caused by the fact that more young people responded in India. A lot of them do not have a high income, because for example they are still students.

Understanding of sustainable tourism

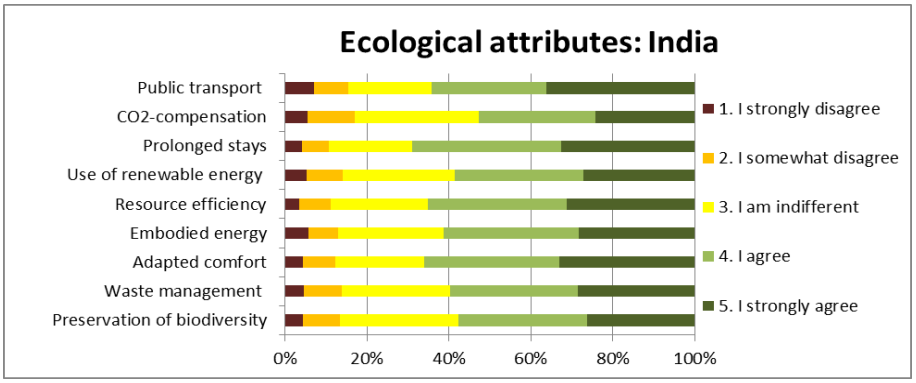

Figure 38: India: Assessment of ecological attributes

The Indian respondents assess the ecological attributes quite similarly to the average over the whole sample of all countries (see Figure 38). Only the share of agreement for "prolonged stays" is clearly higher, and "adapted comfort" and "public transport" also have higher shares of agreement.

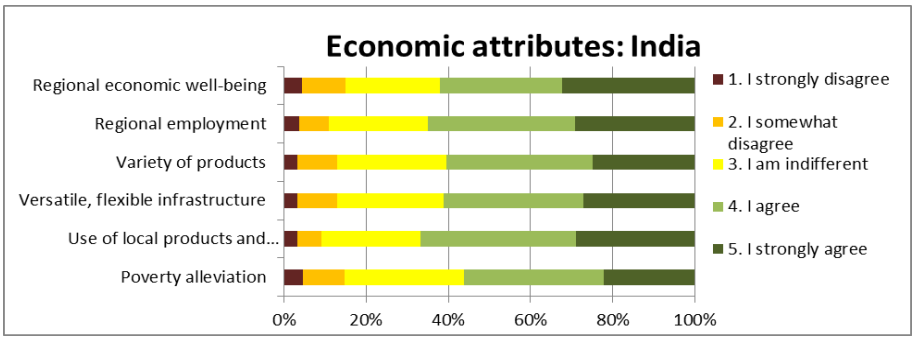

Figure 39: India: Assessment of economic attributes

The economic attributes are also perceived more or less in the same way as in the sample over all countries (see Figure 39). Only "versatile, flexible infrastructure" and "variety of products" have higher agreement shares of ca. 10 percentage points.

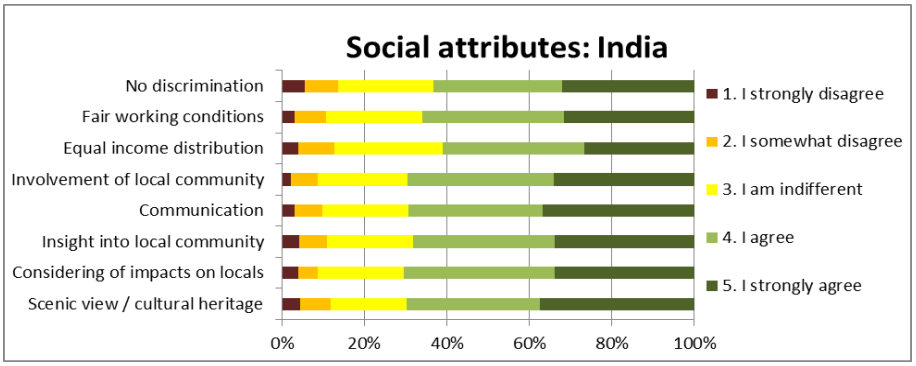

Figure 40: India: Assessment of social attributes

The social attributes are consistently assessed less critically and have higher shares of agreement (see Figure 40) The highest deviation from the average is observed for the attribute "equal income distribution". "Insight into local community" and "communication" also have higher shares of agreement.

Appendix A13 Factsheet Russia

Rank	Russia	Overall
1	Weather / climate	Weather / climate
2	Price	Price
3	Food	Accessibility to and from the destination
4	Local culture	Local culture
5	Landscape	Landscape
6	Accessibility to and from the destination	Food
7	Local activities (sports, excursions, etc.)	**Sustainability**
8	**Sustainability**	Local activities (sports, excursions, etc.)

Table 35: Rating according to importance in decision to book a holiday in Russia

Sustainability is ranked as eighth and last among the important factors that influence the decision to book a holiday, one rank lower than in the overall ranking over all countries Table 35). However, sustainability is among the top three influencing factors for 21.9% of the respondents. Interestingly, food is more important for Russian tourists, as it is ranked third, and accessibility to and from the destination is less important (rank 6) compared to the overall ranking over all countries.

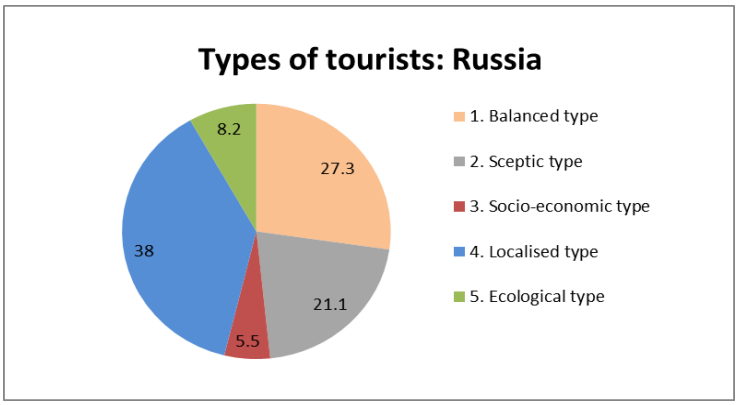

Figure 41: Types of tourists with respect to sustainability in Russia

The largest category of tourist type in the Russian sample is the localised, having a share of 38%. This is a large deviation from the average over all countries. Therefore, the shares of the two main groups, balanced and sceptic type are clearly below the average over all countries (see Figure 41). The shares of the socio-economic and the ecological type are also relatively small.

47.2% of the Russian respondents know are aware of sustainable tourism products, which is a much higher share than the average over all countries. Russia is also above the average for the share of tourists who have already booked a sustainable tourism product, with 28.6 already having booked such a product. Furthermore, only 32.6% of the Russians state that they normally book their vacations online. This is much lower compared to the overall sample.

Socio-demographic data

53.4% of the respondents are women, which is above the average. Regarding the age structure, more young people are included compared to the overall sample: 23.4% of the respondents are from the 15-24 year old category, which is a much higher share than the average. Instead, fewer tourists from the 35-44 year old category (17.75) and from the 55-64 year old category (9.2%) have participated. More tourists with a high level of education have participated: The share of respondents with a high level of education adds up to 70.9%. Regarding income, there are more people with low or lower-middle income (total of 31.3%) and more people with upper-middle income (34.9%) compared to the average over all countries. Therefore, there are much fewer people with a higher income (33.8%). This lower share of respondents with a higher income is surprising if it is compare to the high share of respondents with a high level of education. However, it can be explained by the fact, that there are many more young people who are still students and/or do not earn a lot of money in the Russian sample.

Understanding of sustainable tourism

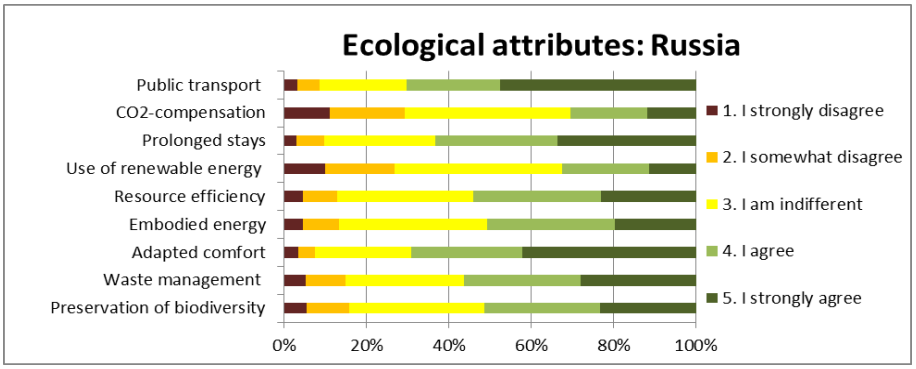

Figure 42: Russia: Assessment of ecological attributes

The Russian respondents assess some of the ecological attributes much more critically (see Figure 42): They agree with the attributes "use of renewable energy" and "CO_2-compensation" with shares that are ca. 10% lower than the shares of agreement of the average over all countries. Also, the other energy-related attributes such as "resource efficiency" and "embodied energy" have lower shares of agreement. In contrast, "adapted comfort", "prolonged stays" and "public transport" have higher shares of agreement.

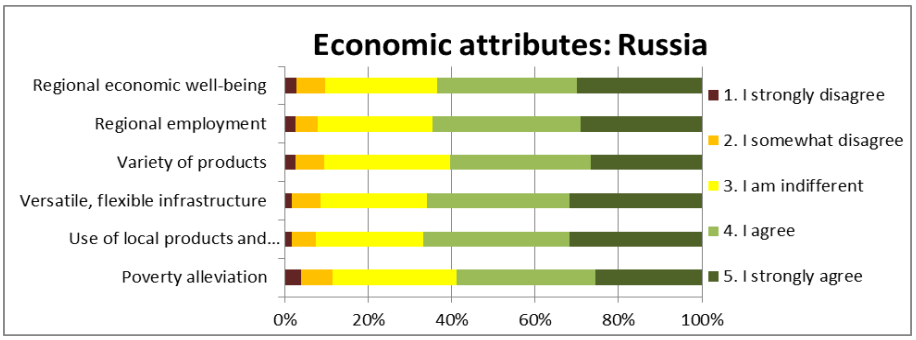

Figure 43: Russia: Assessment of economic attributes

The assessment of the economic attributes is more balanced than the average (see Figure 43): The attributes "poverty alleviation", "versatile, flexible infrastructure" and "variety of products" have higher shares of agreement compared to the average over all countries.

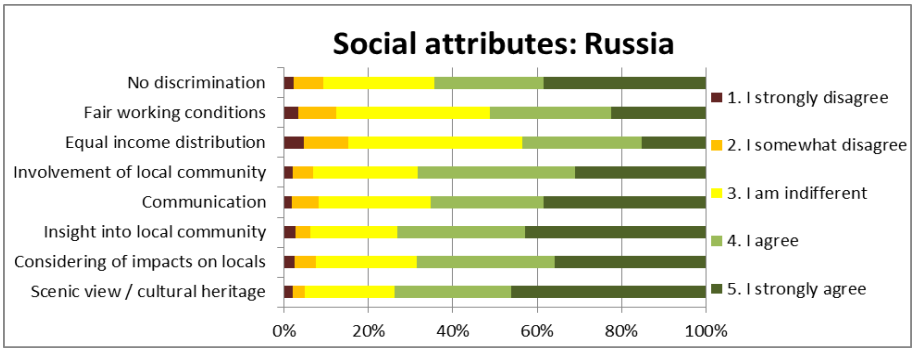

Figure 44: Russia: Assessment of social attributes

The assessment of the social attributes corresponds to the average assessment in the overall sample. "Equal income distribution" has also the lowest share of agreement and "Scenic view / cultural heritage", "considering of impacts on locals" and "insight into local community" also have the highest shares of agreement (see Figure 44).

Appendix A14 Factsheet Sweden

Rank	Sweden	Overall
1	Weather / climate	Weather / climate
2	Price	Price
3	Accessibility to and from the destination	Accessibility to and from the destination
4	Food	Local culture
5	Landscape	Landscape
6	Local culture	Food
7	**Sustainability**	**Sustainability**
8	Local activities (sports, excursions, etc.)	Local activities (sports, excursions, etc.)

Table 36: Rating according to importance in decision to book a holiday in Sweden

Sustainability is ranked as seventh among the important factors that influence the decision by the Swedish respondents to book a holiday, as in the overall ranking over all countries (see Table 36).However, sustainability is among the top three influencing factors for 15.4% of the respondents.

The distribution of the different types of tourists (see Figure 45) does not largely differ from the distribution over all countries: The sceptic type has a slightly higher share with 28.5%, whereas the balanced type has a slightly smaller share. However, the balanced type is still the largest group, closely followed by the sceptic. The socio-economic type has a share of 14.3% which is a little bit higher than the average value of 12.3%. The other two groups are almost as large as in the overall sample.

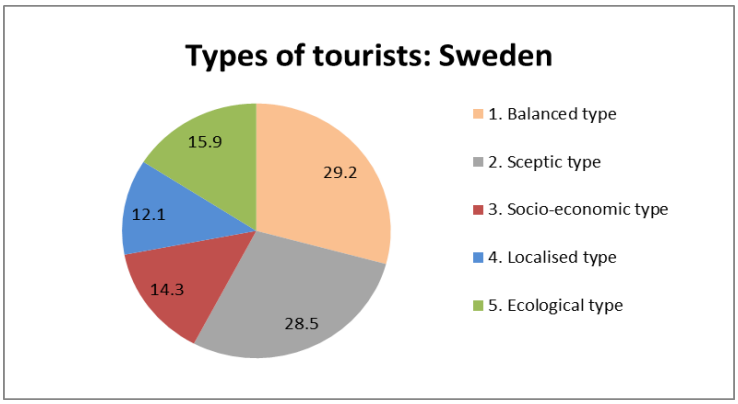

Figure 45: Types of tourists with respect to sustainability in Sweden

Only 19.5% of the Swedish respondents are aware of sustainable tourism products. This is a much lower value compared with the average over all countries. Therefore, since most do not know a sustainable product, Sweden is clearly below average for the share of travellers who

have already booked a sustainable tourism product with only 8.4% already having booked such a product. However, many more Swedish people normally book their vacations online (83.3%).

Socio-demographic data

50.9% of the respondents are women. The share of women is therefore a little higher than in the overall sample. Regarding the age structure, the distribution is quite similar to the overall sample. However, fewer people from the 35-44 year old category (16.1%) and more from the 65-74 year old category (10.3%) have participated. Many more tourists with a middle level of education have participated: The share of respondents with a middle level of education adds up to 48.5%. Accordingly, the share of respondents with an upper level of education is, with a value of 43.5%, much smaller compared to the average over all countries. Regarding income, there are more people with a high income level (55.5%) and fewer people with a lower middle income (12.7%) compared to the average.

Understanding of sustainable tourism

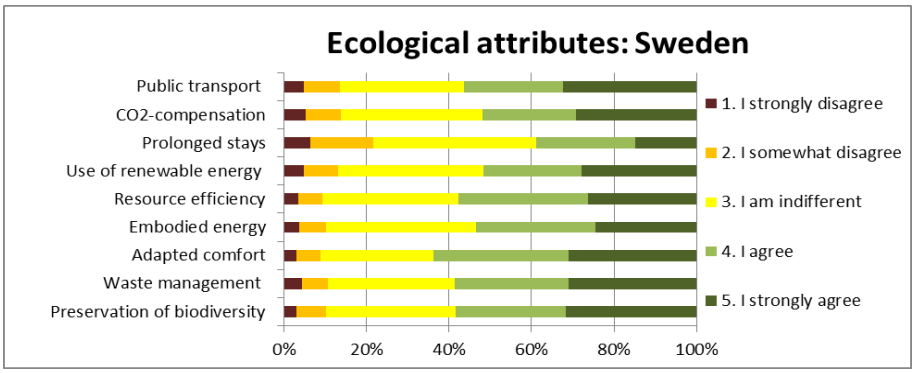

Figure 46: Sweden: Assessment of ecological attributes

The assessment of the attributes of sustainable tourism by Swedish respondents generally coincides mostly with the average over all countries. In the ecological dimension, only the deviation for "prolonged stays" which is judged as less sustainable is worth remarking on (see Figure 46).

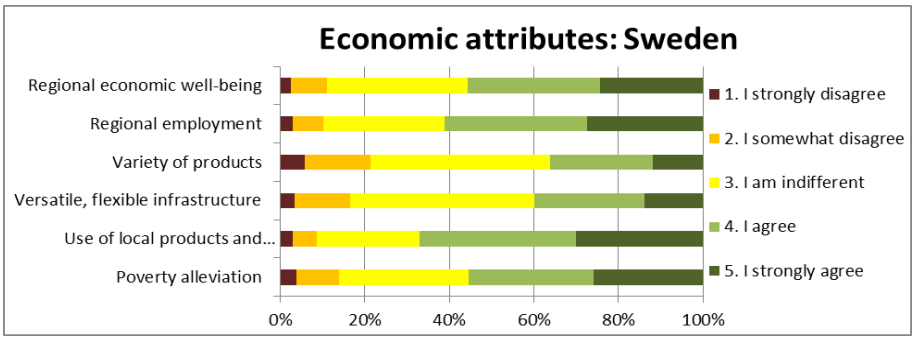

Figure 47: Sweden: Assessment of economic attributes

The economic attributes are also judged similarly. However, the attributes "versatile, flexible infrastructure" and "variety of products" are more critically assessed and have therefore a lower share of agreement (see Figure 47).

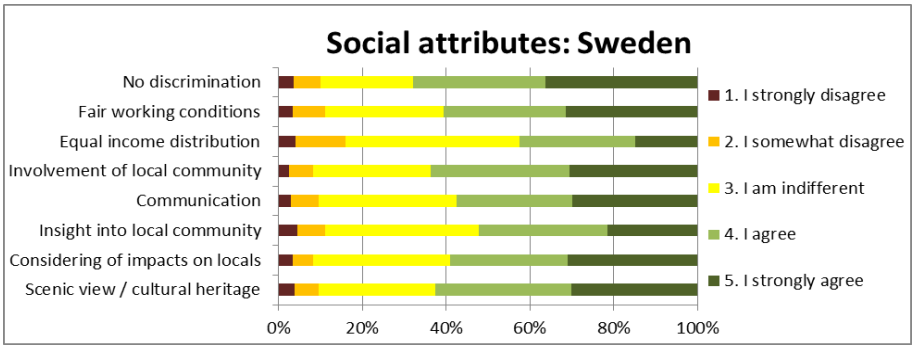

Figure 48: Sweden: Assessment of social attributes

Regarding the social attributes, the "equal income distribution" especially has a lower rate of agreement. Instead, "no discrimination" has a higher rate of agreement. The rest of the attributes are all assessed in the same manner as in the overall sample (see Figure 48).

Appendix A15 Factsheet Switzerland

Rank	Switzerland	Overall
1	Weather / climate	Weather / climate
2	Landscape	Price
3	Local culture	Accessibility to and from the destination
4	Accessibility to and from the destination	Local culture
5	Price	Landscape
6	Food	Food
7	**Sustainability**	**Sustainability**
8	Local activities (sports, excursions, etc.)	Local activities (sports, excursions, etc.)

Table 37: Rating according to importance in decision to book a holiday in Switzerland

Sustainability is ranked as seventh among the important factors that influence the decision to book a holiday, as in the overall ranking over all countries (see Table 37). However, sustainability is among the top three influencing factors for 17.4% of the respondents. Interestingly, landscape is ranked second and price only fifth, which differs from the average over all the countries.

Regarding the representation of the different cluster types, the most interesting difference from the average over all countries is the clearly higher share of ecologists (23.7% compared to the average of 15.1%, see Figure 49). The share of the sceptic type (20.5%) is clearly below the average of 25%, as well as the share of the localised type with 9.5%. The shares of the balanced type and the socio-economic type are near the average.

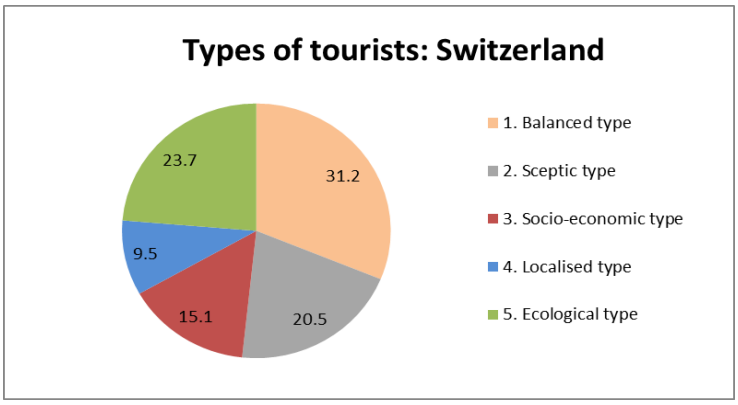

Figure 49: Types of tourists with respect to sustainability in Switzerland

39.9% of the Swiss respondents are aware of sustainable tourism products. This correlates with the average over all countries. Switzerland is a little below average for the share of travellers who have already booked a sustainable tourism product, with only 16.7% already having

booked such a product. Furthermore, 63.6% of the Swiss stated that they normally book their vacations online. This is a little lower compared to the overall sample.

Socio-demographic data

46.4% of the respondents are women. This corresponds with the result in the overall sample. Regarding the age structure, fewer people are from the 25-34 year old category, having a share of 17.5%. Instead, more tourists from the 35-44 year old category have participated (28.9%). In general, the distribution of age is balanced between young and old. With regards to education, many more tourists with a lower or middle education level have participated: The share of respondents with an upper level of education adds up to 53.2%. This is much less than in the overall sample. This is also reflected in the distribution of income: There are more people with a lower middle income (23.6%) and many more with an upper middle income (39.1%). Accordingly, there are fewer people with a higher income (39.4%) compared to the average over all countries. This can be explained by the fact that also in Germany people with lower income and a lower level of education have access to the internet and have enough money to travel compared to people in less developed countries. Accordingly, much fewer respondents with a high income are found in the sample (30.4%). Travelling is possible for all people with all different kind of education and income in Switzerland and it is therefore a straightforward result, that people with lower income and education are a higher share of the Swiss sub-sample.

Understanding of sustainable tourism

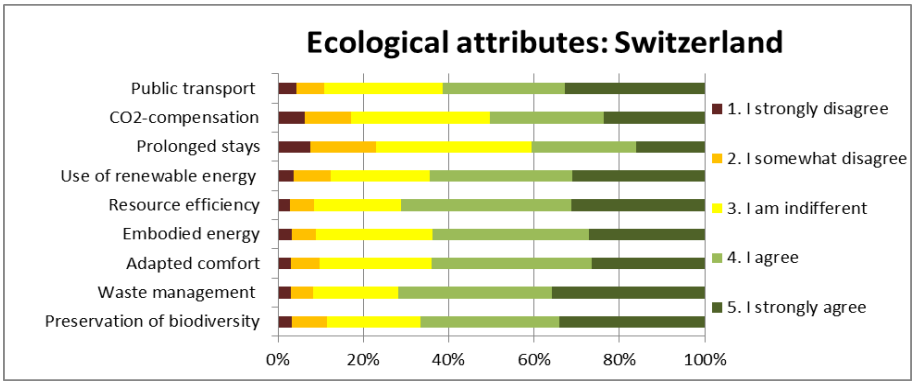

Figure 50: Switzerland: Assessment of ecological attributes

Swiss respondents show a higher rate of agreement regarding the attributes “preservation of biodiversity”, “waste management”, “resource efficiency” and “use of renewable energy”. In contrast, “prolonged stays” was assessed more critically (see Figure 50).

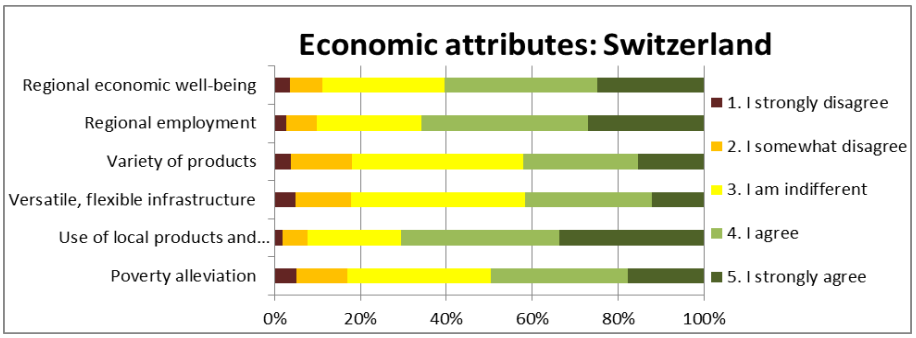

Figure 51: Switzerland: Assessment of economic attributes

The attributes have the same ordering regarding the shares of agreement as in the overall sample. However, some of the values differ (see Figure 51). The attributes assessed at the lowest level, "versatile, flexible infrastructure" and "variety of products" are perceived as clearly less sustainable by Swiss respondents compared to the average over all countries. However, "use of local products and services" is seen as sustainable by slightly more respondents.

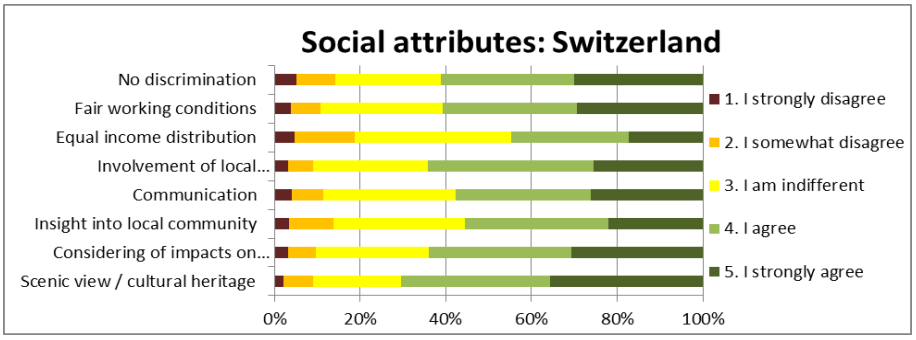

Figure 52: Switzerland: Assessment of social attributes

The assessment of the social attributes is rather similar to the average assessment over all countries. Only the attributes "insight into local community" and "communication" are judged as a little less sustainable (see Figure 52).

Appendix A16 Factsheet United Kingdom

Rank	Great Britain	Overall
1	Price	Weather / climate
2	Weather / climate	Price
3	Accessibility to and from the destination	Accessibility to and from the destination
4	Local culture	Local culture
5	Landscape	Landscape
6	Food	Food
7	Local activities (sports, excursions, etc.)	**Sustainability**
8	**Sustainability**	Local activities (sports, excursions, etc.)

Table 38: Rating according to importance in decision to book a holiday in Great Britain

Sustainability is ranked as eighth among the important factors that influence the decision to book a holiday (see Table 38). However, sustainability is among the top three influencing factors for 12.1% of the respondents.

The distribution of types consists of two main types: the balanced and the sceptic type. The sceptic type is much larger (31.3%) than in the overall sample and the most important type in the UK (see Figure 53). The balanced type is the second largest group with a share of 28%. The localised and ecological type is less represented in the UK, which causes the socio-economic type, with a share of 17.6%, to be more important compared to the overall sample.

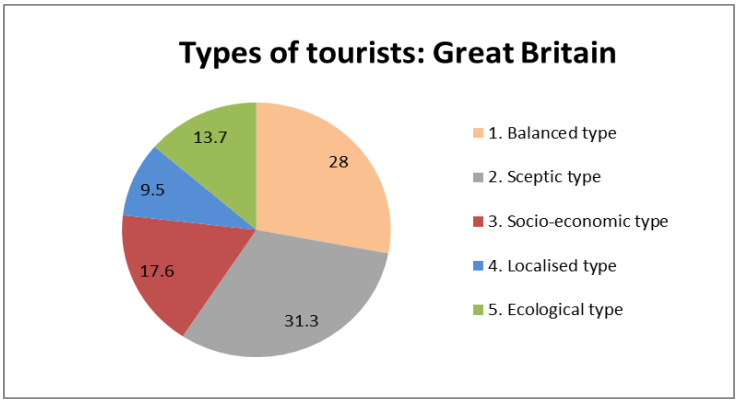

Figure 53: Types of tourists with respect to sustainability in Great Britain

Much fewer respondents from the UK, i.e. 14.8%, are aware of sustainable tourism products. Therefore, since most are not aware of a sustainable product, UK is clearly below average for the share of tourists who have already booked a sustainable tourism product, with only 8.4% already having booked such a product. However, many more British normally book their vacations online (80.3%).

Socio-demographic data

53.5% of the respondents are women. This value is above the average over all countries. Regarding the age structure, the distribution is mostly similar to the distribution over all countries. However, fewer respondents are from the 15-24 year old category (8.3%), and more from the 55-64 year old category (21.6%) have participated. More tourists with a lower or middle education level have participated: The share of respondents with a low level of education is 12.4%, and the share of respondents with a middle level of education is 34.2%. Hence, the share of respondents with a higher education level is much smaller at 53.4%. This is also reflected in the distribution of income: There are more people with low income (14.9%) and fewer people with a higher income (40.3%) compared to the average. This can be explained by the fact that in the UK people with lower incomes and lower levels of education also have access to the internet and have enough money to travel compared to people in less developed countries

Understanding of sustainable tourism

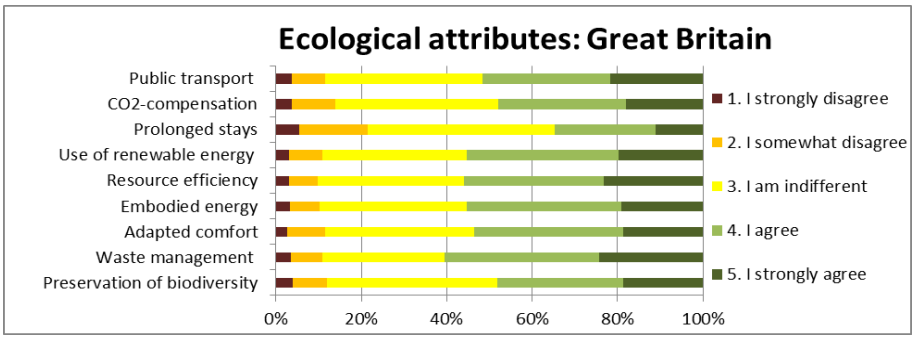

Figure 54: Great Britain: Assessment of ecological attributes

The British assess the ecological attributes of sustainable tourism more critically., "Prolonged stays" and "preservation of biodiversity" are especially not perceived as sustainable Figure 54).

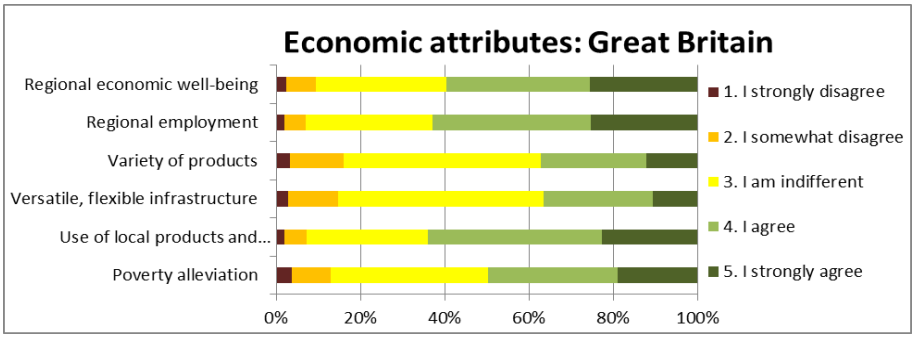

Figure 55: Great Britain: Assessment of economic attributes

The assessment of the ecological attributes is not different from the average over all countries regarding the ordering of the highest and lowest ranked attributes. However, "versatile, flexible infrastructure" and "variety of products" have clearly lower agreement rates (see Figure 55).

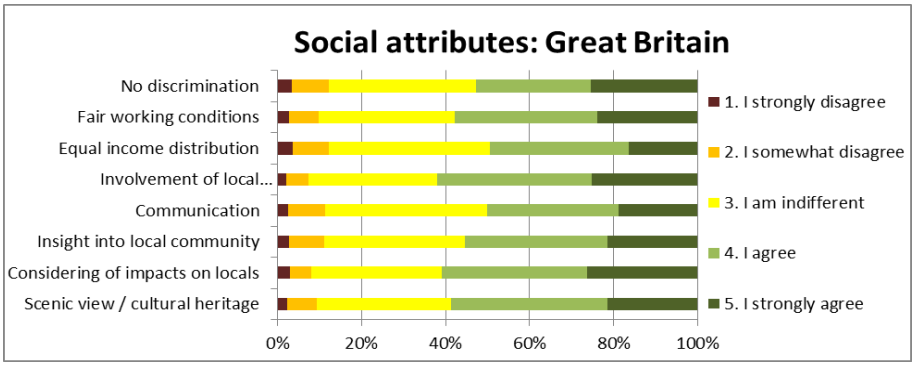

Figure 56: Great Britain: Assessment of social attributes

The social attributes were also assessed more critically in the UK (see Figure 56). The agreement rates are between 50% and 60% for most of the attributes. "Equal income distribution" and "communication" are seen as least relevant and "involvement of local community" is judged as most relevant. The lower rate of agreement with the attribute "scenic view / cultural heritage" is astonishing, because in all other countries, it is one of the most important attributes. But in the UK less than 50% judge the upkeep of a scenic view and the cultural heritage as an attribute of sustainable tourism.

Appendix A17 Factsheet USA

Rank	USA	Overall
1	Price	Weather / climate
2	Weather / climate	Price
3	Accessibility to and from the destination	Accessibility to and from the destination
4	Local culture	Local culture
5	Landscape	Landscape
6	Food	Food
7	Local activities (sports, excursions, etc.)	**Sustainability**
8	**Sustainability**	Local activities (sports, excursions, etc.)

Table 39: Rating according to importance in decision to book a holiday in USA

Sustainability is ranked as eighth among the important factors that influence the decision to book a holiday, and is one rank lower than in the overall ranking over all countries (see Table 39). However, sustainability is among the top three influencing factors for 14.3% of the respondents.

The distribution of the different types of tourists (see Figure 57) is equal to the distribution over all countries: The two main groups balanced and sceptic type are the most important ones in the USA as well, with the share of the sceptic type being a little larger (28.6% vs. 25%). Furthermore, there are slightly fewer people from the socio-economic type (10.0% vs. 12.3%) and from the ecological type (13.8% vs. 15.1%).

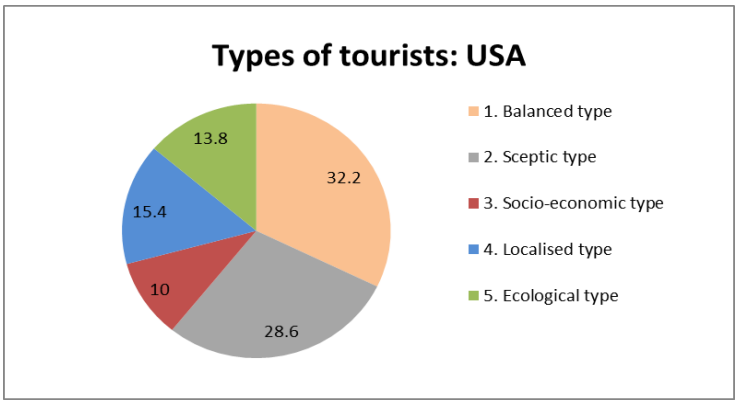

Figure 57: Types of tourists with respect to sustainability in USA

18.2% of the US respondents are aware of sustainable tourism products which is much below the average over all countries. Therefore, since most are not aware of a sustainable product, the USA is clearly below average for the share of travellers who have already booked a sustainable tourism product, with only 9.4% already having booked such a product. However, more US-

Americans normally book their vacations online (76%) compared to the average over all countries.

Socio-demographic data

49.0% of the respondents are women. This corresponds with the result in the overall sample. Regarding the age structure, it is interesting that much more old people from the 55-64 year old category, having a share of 36.6% in the sample of the USA, have participated, which is less than the average. Instead, more tourists from the 65-74 year old category have participated. Many more tourists with a lower or middle level of education have participated. Accordingly, less young people have participated: 17.5% are from the 25-34 year old category and 9.8% from the 15-24 year old category. The share of respondents with a high level of education is much higher at 81.9%. Interestingly, there are much fewer people with a middle level of education (15.0%), and slightly fewer with a lower level of education (3.1%) compared to the average over all countries. This is also reflected in the distribution of income: There are much more people with an upper income (70.7%).

Understanding of sustainable tourism

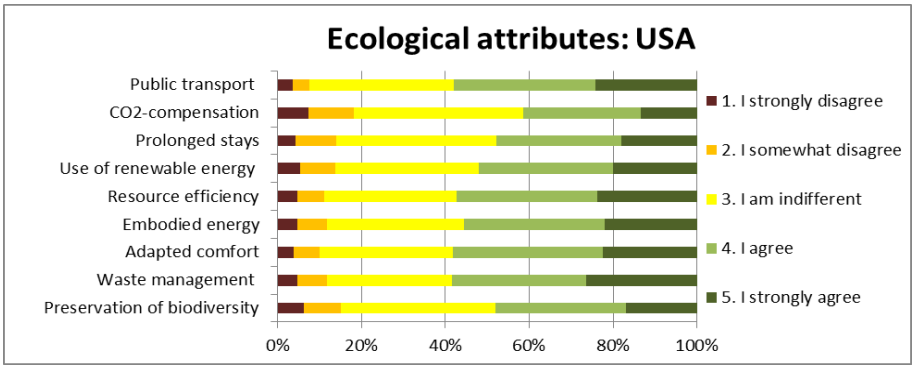

Figure 58: USA: Assessment of ecological attributes

The respondents from the USA assess the ecological attributes a little more critically (see Figure 58). “Preservation of biodiversity” and “CO2-compensation” have clearly lower rates of agreement. The shares of respondents agreeing are slightly below the average for all other ecological attributes.

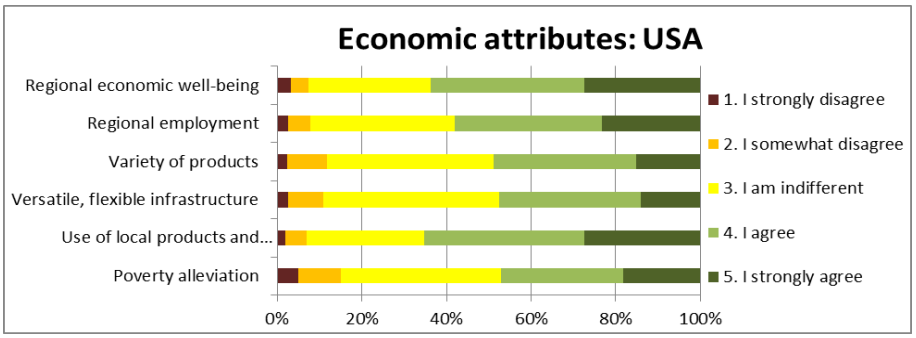

Figure 59: USA: Assessment of economic attributes

The assessment of the economic attributes corresponds mostly to the average over all countries (see Figure 59). “Poverty alleviation” and “regional employment” have slightly lower shares of

respondents agreeing. Instead "regional economic well-being" is assessed as sustainable by a higher share of people.

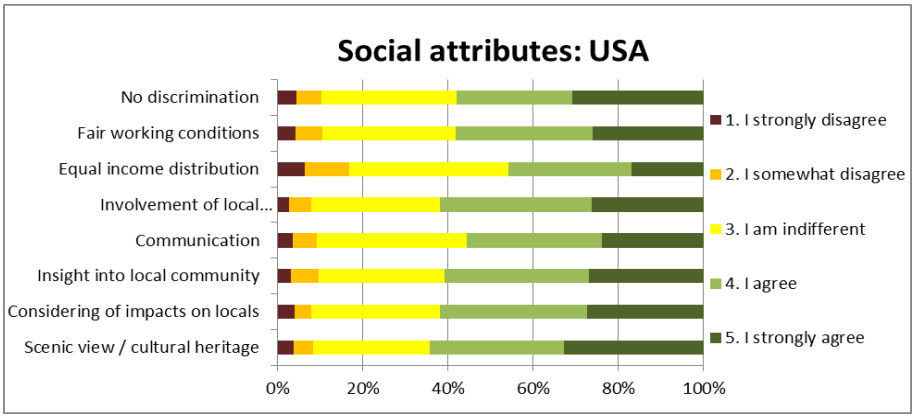

Figure 60: USA: Assessment of social attributes

Furthermore, the assessment of the social attributes corresponds to the average assessment over all countries. Only "communication" and "no discrimination" are assessed as less sustainable (see Figure 60).